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ABSTRACT

Presented is the report on the development and 1-year implementation of a minimum objective system with the kindergarten through grade 6 classes at the Hinesburg Elementary School in Vermont. Discussed is the project's intention to determine minimum objectives to be met by all students at a given grade level in areas such as language arts and mathematics. It is explained that implementation involved charting progress of all students toward stated objectives. Reported are the following major conclusions: 90 percent of the children initially achieving below grade level averaged an improvement of 109 percent over previous years; and the general feeling of the teachers toward the system was positive. Also included are charts of individual and grade progress levels, a positive affect questionnaire for the teacher, seven case studies of learning disabled second grade children, and the procedural steps implemented when the Merrill linguistic readers program was used, when the Ginn 100 reading series was used, and when the Science Research Associated Reading series was used. (DB)

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A REPORT:

THE DEVELOPMENT & IMPLEMENTATION

OF A

MINIMUM OBJECTIVE SYSTEM

IN THE

HINESBURG ELEMENTARY SCHOOL

(1)

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This is a portion of a report on the development and implementation of a minimum objective system in the Hinesburg Elementary School, Hinesburg, Vermont, June, 1974. The complete report is made up into four separate sections:

1. A REPORT: THE DEVELOPMENT AND IMPLEMENTATION OF A MINIMUM OBJECTIVE SYSTEM IN THE HINESBURG ELEMENTARY SCHOOL

2. APPENDIX A: LANGUAGE ARTS OBJECTIVES DEVELOPED BY THE K-6 TEACHERS AT THE HINESBURG ELEMENTARY SCHOOL

3. APPENDIX B: HINESBURG ELEMENTARY SCHOOL MINIMUM OBJECTIVES FOR SCIENCE, PHYSICAL EDUCATION, MUSIC, LIBRARY AND MATH

4. APPENDIX C: REVISED MINIMUM OBJECTIVES K-6, LANGUAGE ARTS, HINESBURG ELEMENTARY SCHOOL

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*Participants in Summer Workshop, 1973.

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THE DEVELOPMENT AND IMPLEMENTATION OF MINIMUM OBJECTIVES IN THE HINESBURG ELEMENTARY SCHOOL SYSTEM

INTRODUCTION

The Hinesburg Elementary School, located in a small community in rural Vermont, has adopted the open classroom model of education as an alternative to the traditional self-contained classroom structure. The open classroom model (Muller, 1972) is not defined entirely by the flexibility of the classroom walls, but by the flexibility of the teachers in their ability to work closely with other professionals to produce a learning environment in which each student can be treated as an individual. In the traditional self-contained classroom structure students are usually grouped by "ability level" as measured by their comparison to group norms in a standardized test, or their performance as compared to their classmates as judged by the teacher or a publisher. In the Hinesburg Elementary School all children remain with their peers in the grade level they would be expected to be in according to the number of years they have been in school. Instruction is individualized for the student according to his own learning rate, interests and current performance levels as proposed by the Hinesburg Design for Education . Implementation of this philosophy has required the dedication, cooperation and hard work of the principal and

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all of the teachers working together with educational specialists, including those in the Special Education Area (SEA) at the University of Vermont.

The Hinesburg Elementary School's relationship with the Special Education Area began in the school year of 1971-72 when SEA graduate students worked with teachers who referred children with measured deficits in academic or social behaviors. Under the supervision of SEA faculty, the graduate students used their skills in consulting, analysis of behavior and individualizing instruction to assist teachers in accelerating the learning rates or improving the social behaviors of referred children.

In the school year of 1972-73, Mr. Adler Muller, the principal, was asked if he would help the SEA with a research project to develop minimum objectives and measurement systems for the areas of social behaviors, language arts and mathematics in the first grade at the Hinesburg School. He and the first-grade teachers, Martha Wade and Beth Splain, agreed to assist the SEA in developing and implementing this project in the first grade.

The philosophical basis for this project was developed by the Special Education Area when the faculty began to discuss what it would be like in an elementary school if each grade level specified a continuum of minimum objectives in behavioral terms. Theoretically, if each child could meet these objectives within a single year, he would then be prepared to go on to the next grade level, and would complete all minimum objectives by the end of the sixth grade (McKenzie, Grad, Klann, 1972).

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The terminal objective for such a program within an elementary school would be:

Conditions	Behavior	Criteria
Given an elementary school with established minimum objectives for grades 1-6	all pupils will meet or exceed the established minimum objectives for that school	within six years

There seemed to be several advantages to such a system:

a) it would be a way to identify essential academic and social objectives to be achieved during each year of instruction by all children;

b) it would provide periodic measures of pupil progress and would serve as an early warning system to identify all children who were performing below a minimum level of achievement;

c) by serving as an early warning system, it would enable the teacher to 1) revise current procedures, 2) devise new teaching/learning procedures, 3) call upon assistance from resource personnel within the school district;

d) it would provide a means to evaluate the effectiveness of new procedures and/or special services.

During the spring of 1972, with these concepts already developed, the first-grade teachers along with personnel from the Special Education Area, developed minimum objectives in the areas of social behavor, language arts and mathematics for the first grade by:

a) obtaining classroom materials and teachers estimates of minimum materials to be covered by all students during the year;

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b) dividing the school year into equal parts;

c) specifying behaviors to be achieved within each time unit, with specific conditions and criteria, at 90-100% accuracy level by each student;

d) designing measurement systems to monitor and evaluate pupil progress.

In the fall of 1972 the implementation of this pilot project of the minimum objective system was begun by the teachers, Beth Splain and Pat Flood, assisted by Martha Wade who had by then become a consulting teacher-in-training, consulting teachers, Susan Hasazi and Mary M. Pierce, and SEA technical associate, Marcia Grad (Wade, Splain, Flood, Grad, Klann, 1973).

The fourth-grade and sixth-grade teachers started developing minimum objectives for their grade levels through course work taught by the consulting teachers. Research developed and implemented through these courses was subsequently presented at the University of Kansas Symposium of Behavior Analysis in Education (LaForge, Pree, Hasazi, 1973) and at the 4th Annual Convention of Behavioral Educators.

As the year progressed and other teachers at the Hinesburg Elementary School became familiar with the work in progress in the first, fourth and sixth grades, the teachers voted unanimously to start the development of minimum objectives for all grade levels.

METHOD

Dr. Hugh S. McKenzie, Chairman of the Special Education Area, University of Vermont, and Miss Jean Garvin, Director of Special Education and Pupil Personnel Services, State

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Department of Education, were approached about the possibility of supporting a summer workshop to develop minimum objectives for all of the elementary school curriculum. The State Department of Education agreed to fund the workshop which would offer six hours of graduate credit plus a stipend for each of the participants.

A proposal (Hasazi, Pierce, 1973) for the workshop was submitted by the consulting teachers with the expected outcomes specified as:

a) development of minimum language, mathematics and social objectives for students in grades 1-6 at the Hinesburg Elementary School;

b) development of an efficient system for monitoring each child's rate of progress toward reaching the objectives;

c) development of appropriate teaching/learning procedures and alternative remedial activities for each of the derived objectives.

The workshop took place at the Hinesburg Elementary School from 8:00 a.m. to 1:00 p.m. for four weeks starting June 18 and ending July 13, 1973.

The course participants were the Hinesburg teachers in grades kindergarten through grade 6, the reading teacher, librarian, science coordinator, music teacher, physical education teacher and consulting teacher aide (who subsequently became one of the three sixth-grade teachers).

The instructors were the two consulting teachers, the consulting teacher intern, and the technical associate.

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Each participant was given reference material(Burdett, 1972) and students were divided into teams according to grade level or specialized area. Each team then began to derive, specify and sequence minimum objectives for its grade level in language arts or in a specialized area such as music, physical education, science and library. Those teachers who had completed minimum objectives for language arts during 1972-73 course work developed minimum objectives for arithmetic. The plan called for the entire faculty to develop minimum objectives for social behaviors for the whole student population, however, this was not done except at the kindergarten level. The teams conferred with the teachers of grade levels above and below their own grade levels so that the programming of objectives would have continuity from one grade to the next.

The instructors worked with the teachers assisting them in stating the objectives so that they were specific as to the conditions, behavior and criteria (Mager, 1962) (Wheeler, Fox, 1972). They also assisted in developing data sheets and graphs for the monitoring and evaluation of pupil progress. Additionally, teachers developed appropriate instructional activities to accompany each objective.

IMPLEMENTATION

In September, 1973 the minimum objective system was implemented in grades kindergarten through six. The teachers took daily data on reading comprehension which in turn was plotted monthly on a six year graph by the technical associate. The consulting teachers met weekly with the classroom teachers to discuss progress of the children in their class. Monthly,

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the consulting teachers reviewed the progress of the children on the six year graph to determine if the rate of growth for any given child was moving sufficiently toward attainment of the minimum objectives for his grade level. During the weekly meetings with the consulting teachers, programs were derived for children who were not progressing at an acceptable rate. The principal also used the data in his monthly conferences with teachers as an occasion to reinforce teachers when the graphs reflected good progress and also to alert himself and the teachers to those children who were not progressing sufficiently.

Data on other language arts objectives such as listening, discussion skills, creative writing, penmanship and grammar were also kept by the teachers (Pree, Cloutier, LaForge, Pierce, Hasazi, 1974). This helped them to determine whether the instructional objectives specified for these areas were being attained. Additionally, this helped them to organize daily instruction. The data collected on the various language arts curriculum areas were used to report on the children's progress to the parents during conferences.

The teachers soon became dissatisfied with their mathematics minimum objectives, feeling that they were not sequenced well and that there was a great deal of review work in each grade which made an overlapping of objectives in the adjoining grade levels. The teachers indicated each month the kind of math skill the child was working on. The technician had a great deal of difficulty in translating this information into grade level because the objectives in the different grade levels were not

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adequately defined. At one point the teachers were in favor of discontinuing collection of monthly math data for the purpose of the six year minimum objective graphing. However, it was decided that the data should be collected and recorded for use in the future when the measurement system has been improved.

RESULTS

Kindergarten

Kindergarten teachers were Patricia Halloran and Virginia Perkins. Objectives were measured, recorded and graphed monthly for each child in the areas of auditory skills, visual skills, pre-reading skills, self-care, social skills, body coordination and language development. Rate of progress in each of these areas could be determined by a glance at the corresponding graph. Figure 1 depicts the number of children in kindergarten who were achieving above or below the minimum rate to master all objectives by the end of the year. Figures 2, 3, 4, 5, 6, 7, and 8 depict the progress of an individual kindergarten child through the 8th time period (April 17) in each of the specified skills areas.

Grades 1-6 - Reading Comprehension

On the following pages are:

a) a graph showing the progress of a child in each grade who progressed on or above grade level (Figures 9, 11, 13, 15, 17 and 19);

b) a graph showing the progress of a child in each grade level who started the year below grade level (Figures 10, 12, 14, 16, 18, 20 and 21).

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Fig. 1 KINDERGARTEN CHILDREN ABOVE OR BELOW MINIMUM RATE AFTER 8TH TIME PERIOD

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Fig. 2 SOCIAL BEHAVIOR - KINDERGARTEN

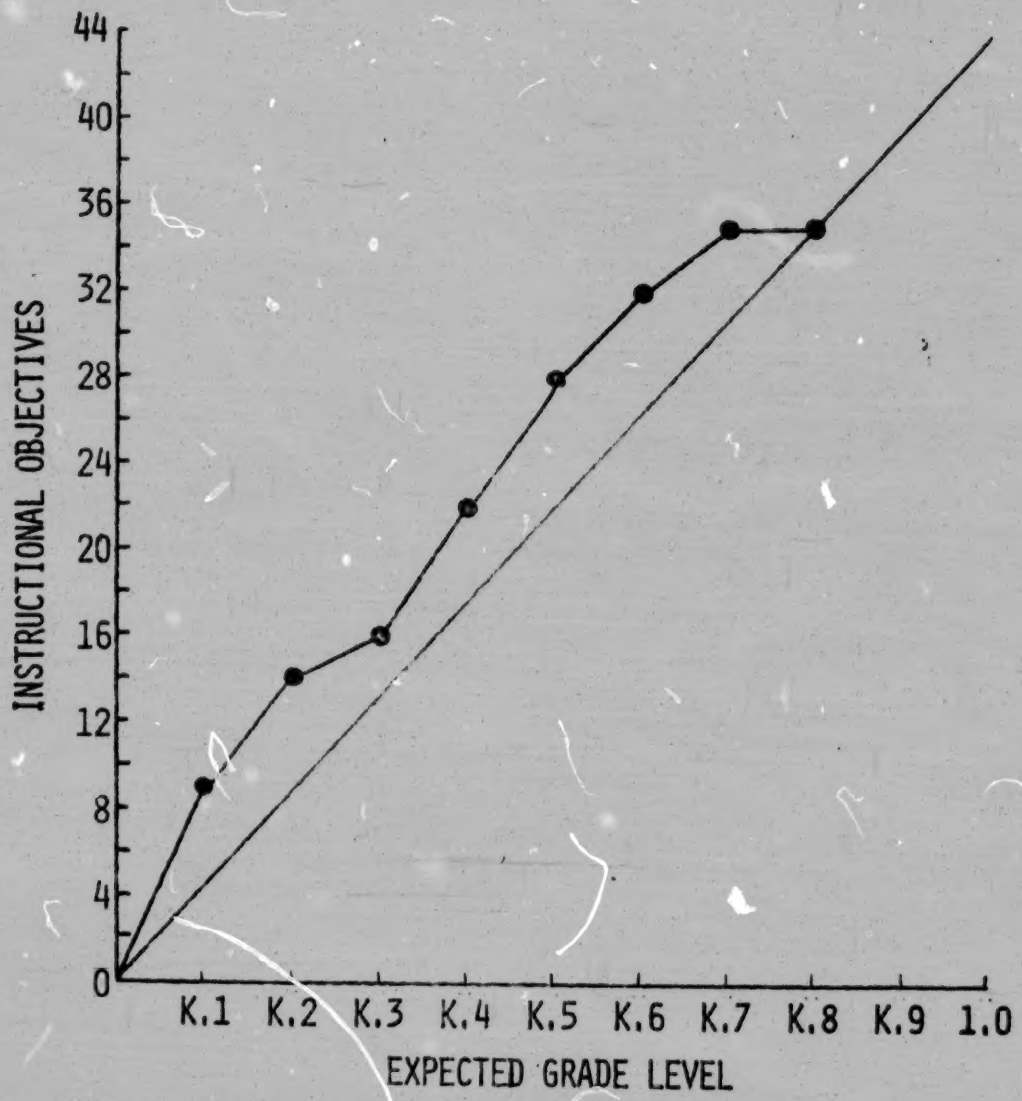

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Fig. 3 SELF CARE - KINDERGARTEN

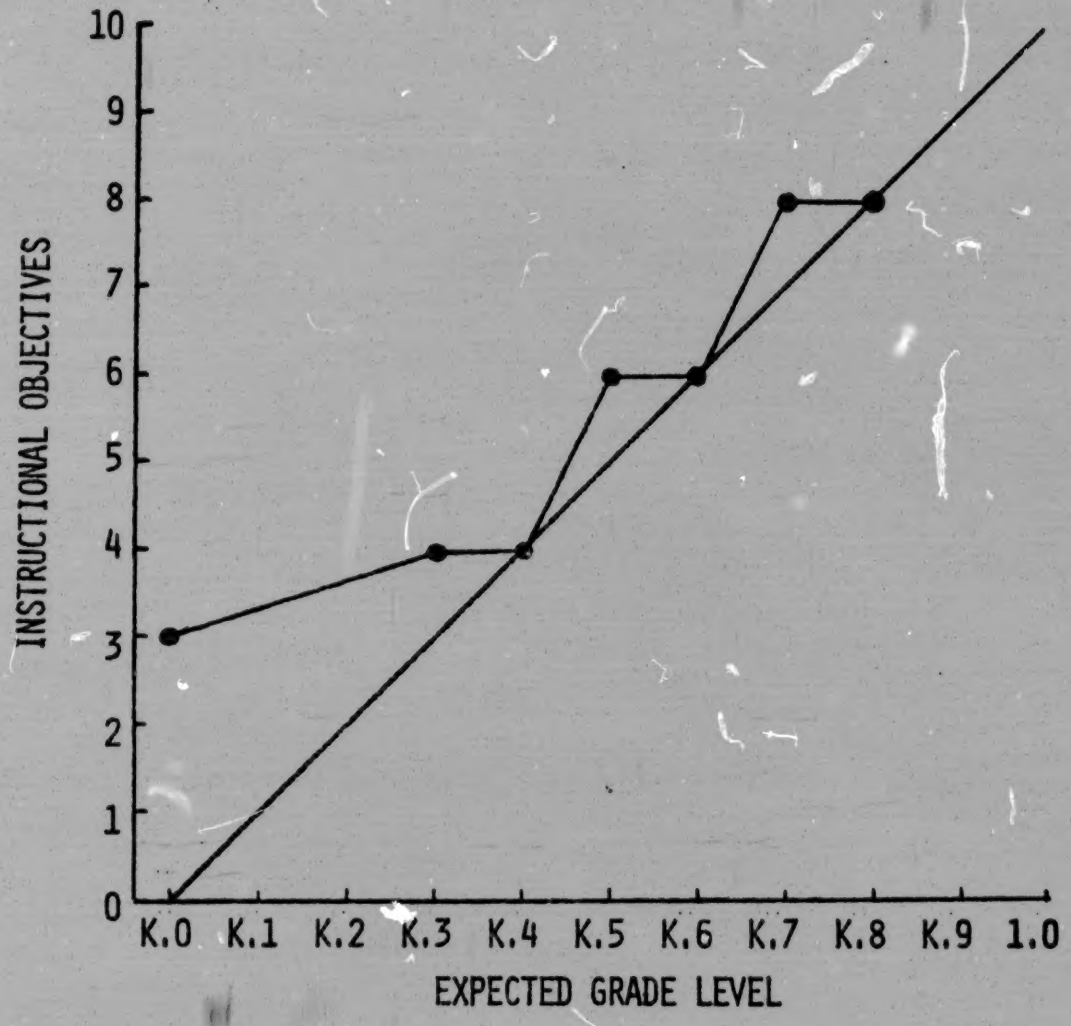

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Fig. 4 VISUAL SKILLS - KINDERGARTEN

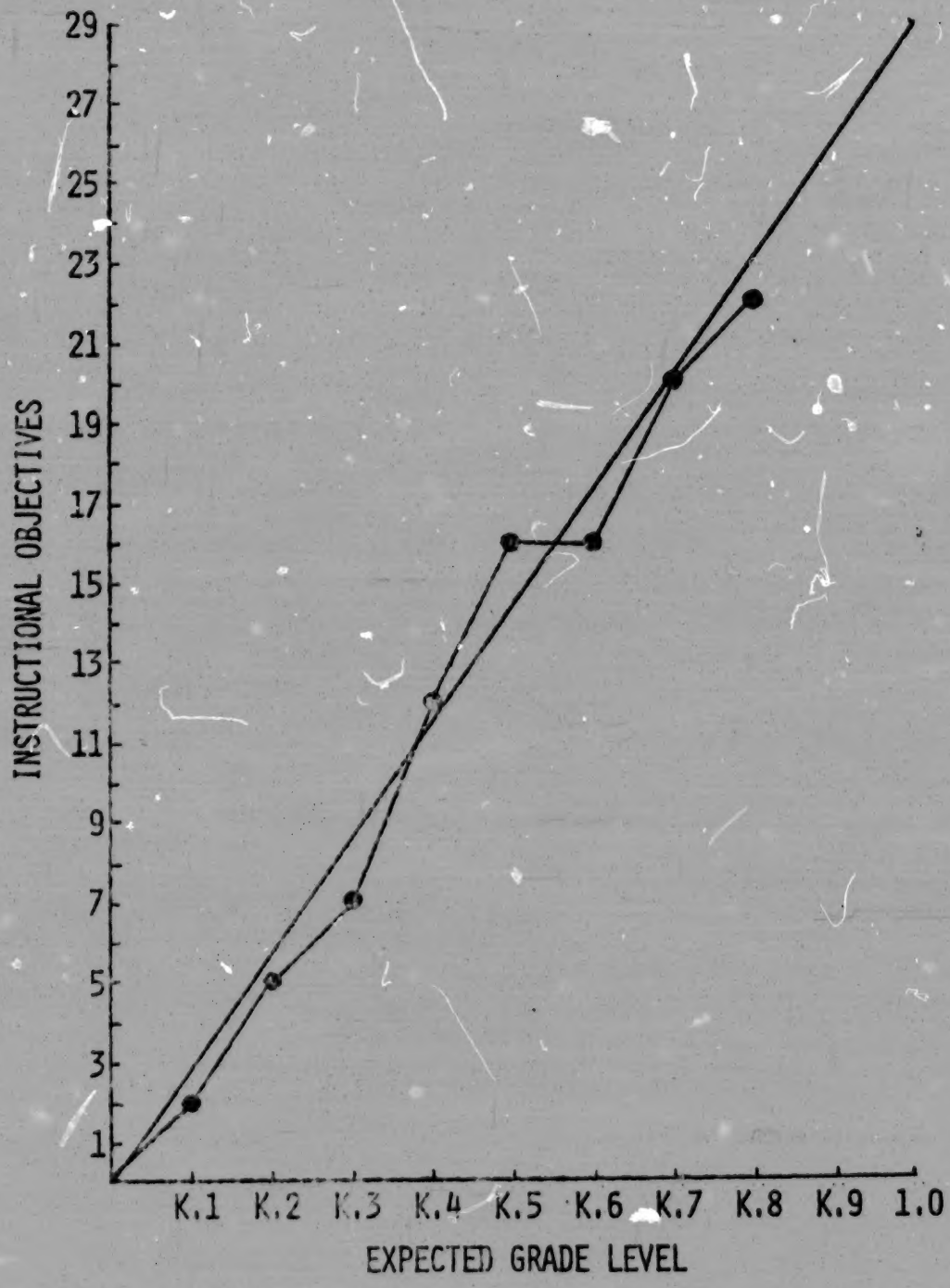

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Fig. 5 AUDITORY SKILLS - KINDERGARTEN

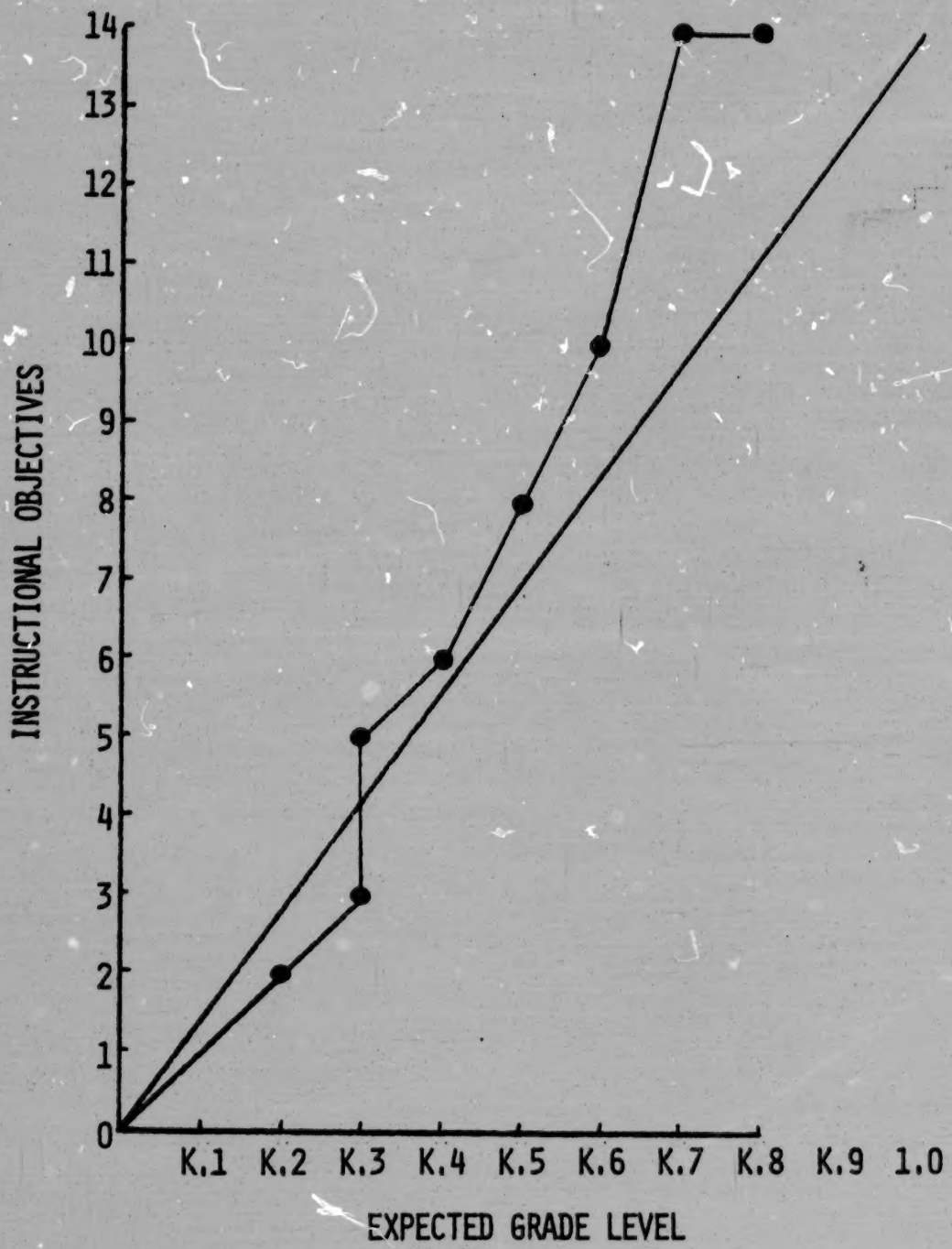

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Fig. 6 LANGUAGE DEVELOPMENT - KINDERGARTEN

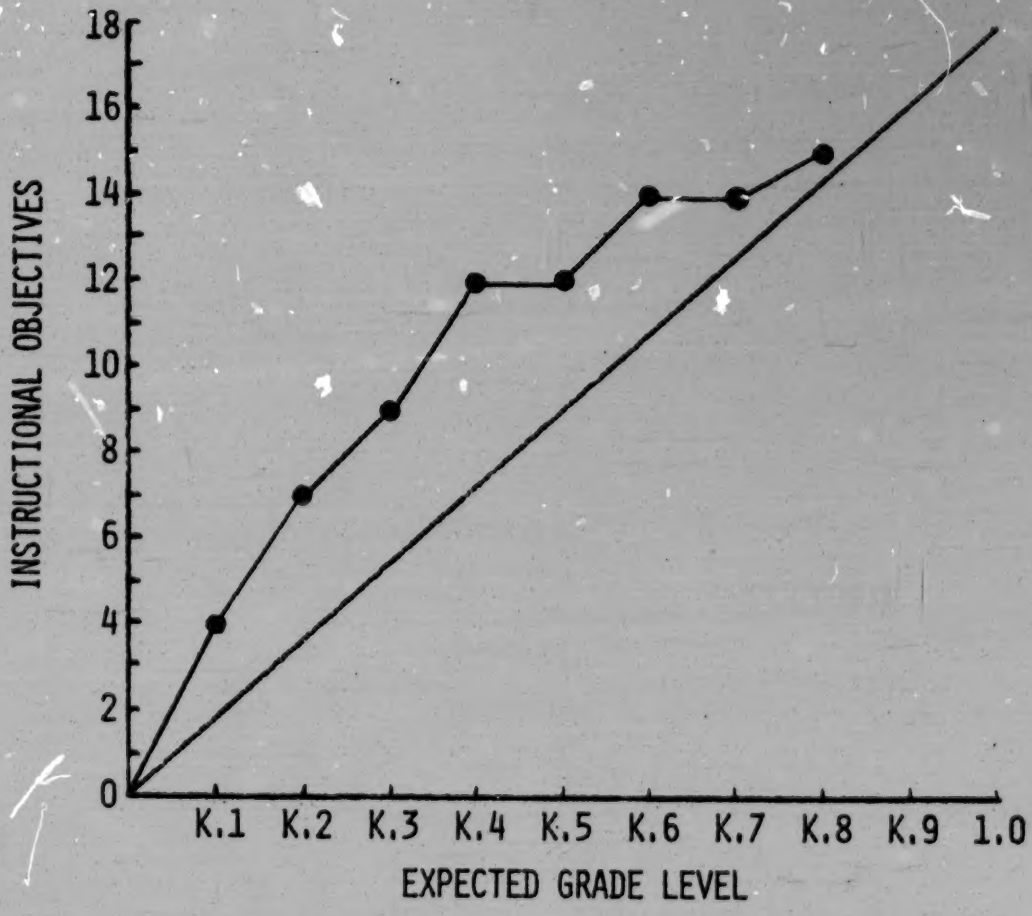

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Fig. 7 PRE-READING - KINDERGARTEN

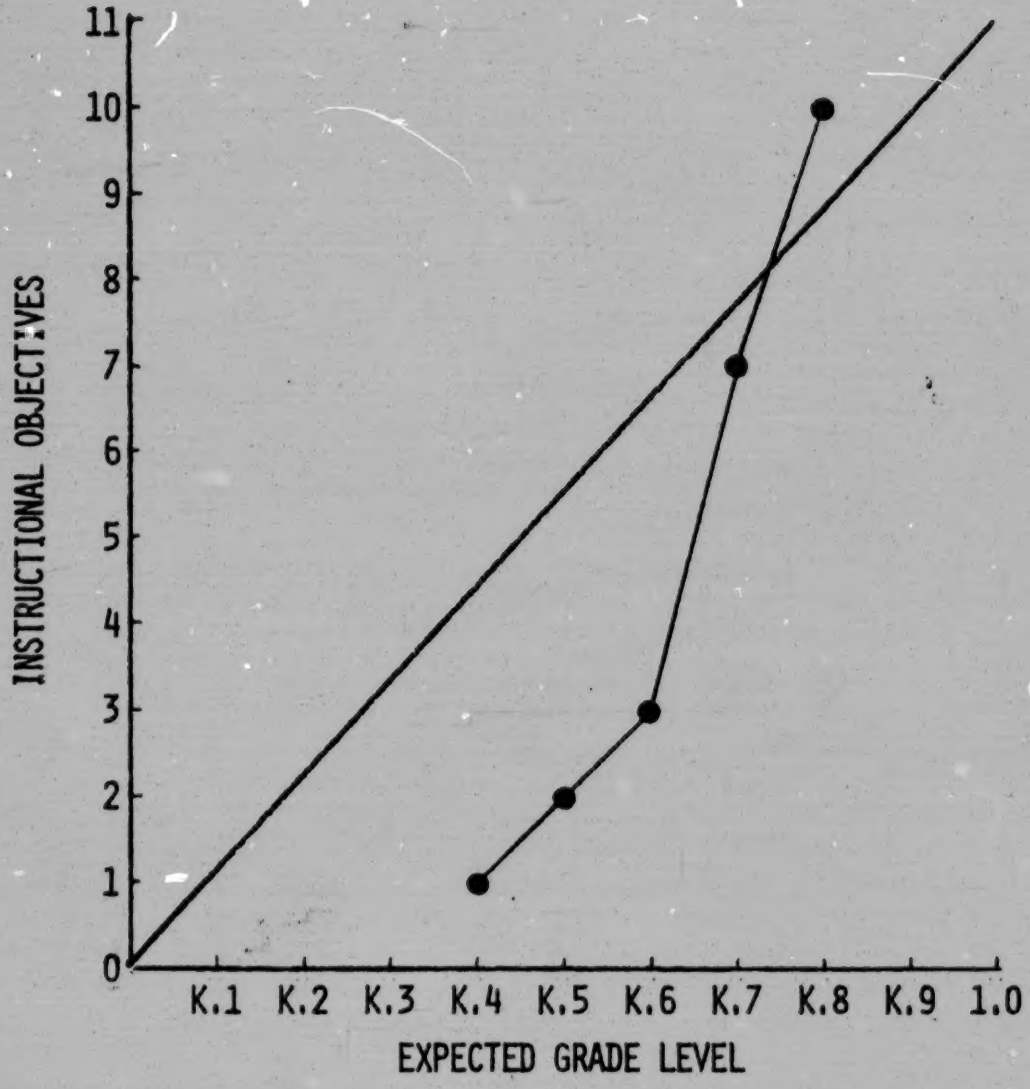

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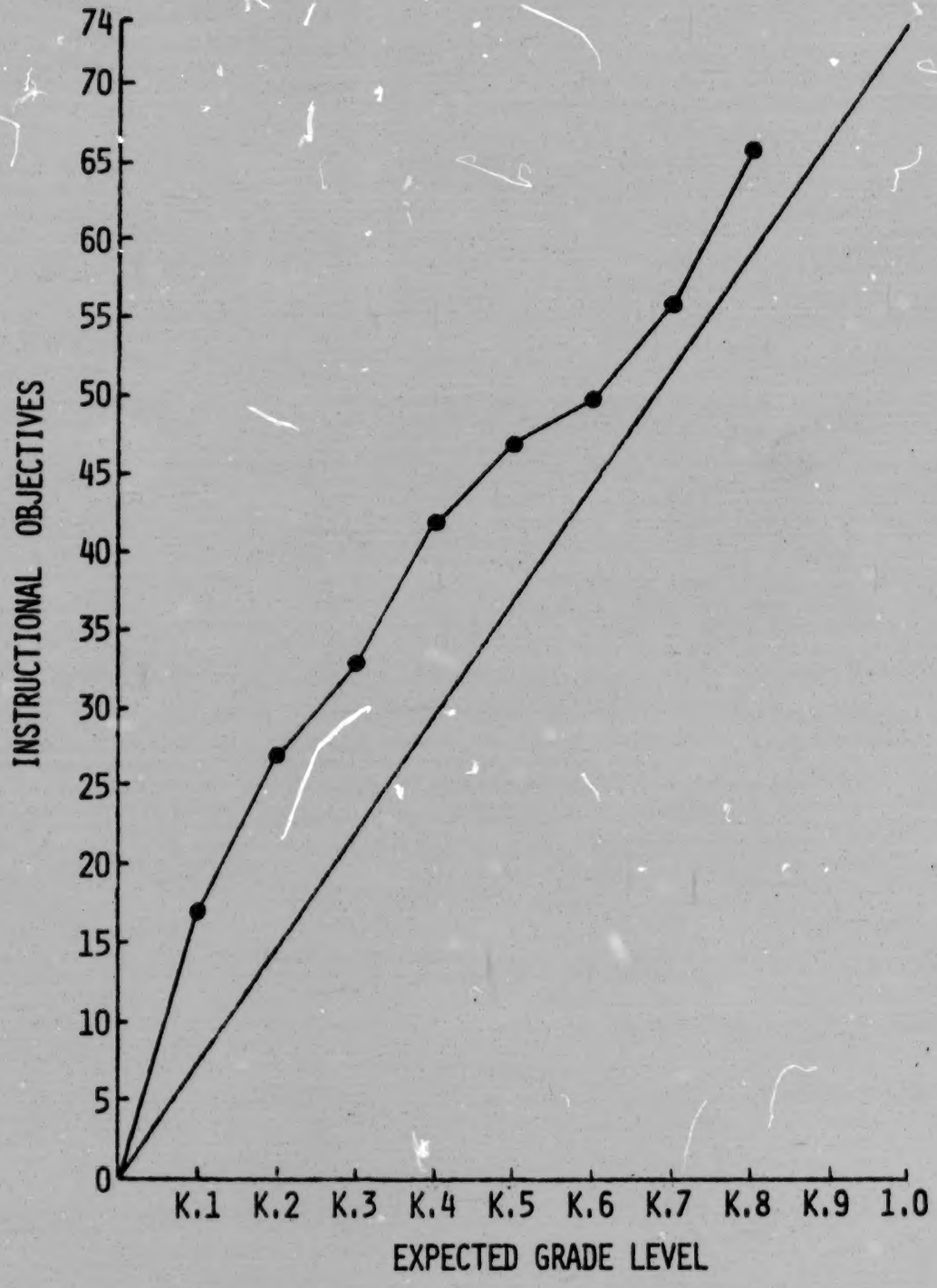
Fig. 8 BODY COORDINATION - KINDERGARTEN



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Each point on the graphs for 3-6 grade children represents the reading level at which the child was able to achieve 80-100% accuracy in reading comprehension and grammatical accuracy. 1.1, 1.2, 1.3, and 1.4 on the first-grade graphs represents 100% accuracy in the acquisition of alphabet letters and sounds. 1.5 - 3.0 on first and second-grade graphs represents 80-100% accuracy on reading comprehension of material read orally with 90-100% accuracy.

c) a brief summary of the reading comprehension growth of the children in each class:

d) a statistical page showing the actual reading growth in terms of grade level, and percentage growth of each child who started the year below grade level or who was below grade level after the 8th time period (April 17). Tables 1 and 2, first grade; 3, second grade; 4, third grade; 5, fourth grade; 6, fifth grade; and 7 and 8, sixth grade.

The statistical page columns can be interpreted as follows:

A. each student who was below grade level when he entered school this year or after the 8th time period (April 17);

B. the entry reading level of each student;

C. the reading level after the 8th time period;

D. the difference between the 8th time period reading level and the entry reading level --the reading growth of the student;

E. the percent of growth prior to the current year. 100% would indicate the percent of growth of a child who was on grade level, as in the case of a child entering third grade whose entry level was 3.0. An entry level of less

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than 3.0 for a third grader would indicate a percent growth of less than 100%. For example (see Table 4 for third grade), student #1 whose entry level was 1.3 and whose expected entry level would be 3.0 has progressed .3 out of an expected 2.0 units of progress. Therefore, his percent of growth in prior years was $\frac{.3}{2.0}$ or 15%;

F. percent growth during the current year through the 8th time period. This percent is based on the reading growth shown in column D. A reading growth of .8 in 8 time periods would indicate a percent growth of 100%. If a child has a reading growth of 1.4 in 8 time periods, his percent growth during the current year would be $\frac{1.4}{8}$ or 175%;

G. the difference between the percent growth this year and the percent growth prior to the current year. If a child's percent growth prior to the current year was 15% and his percent growth the first 8 time periods in the current year was 175%, then the difference in percent growth this year over what we might have expected was an increased percent of 160%.

e. a graph showing the progress of the 50% of the children in grades 2-6 who were below grade level (Figure 22).

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Fig. 9 FIRST GRADE CHILD (#2) ABOVE MINIMUM RATE

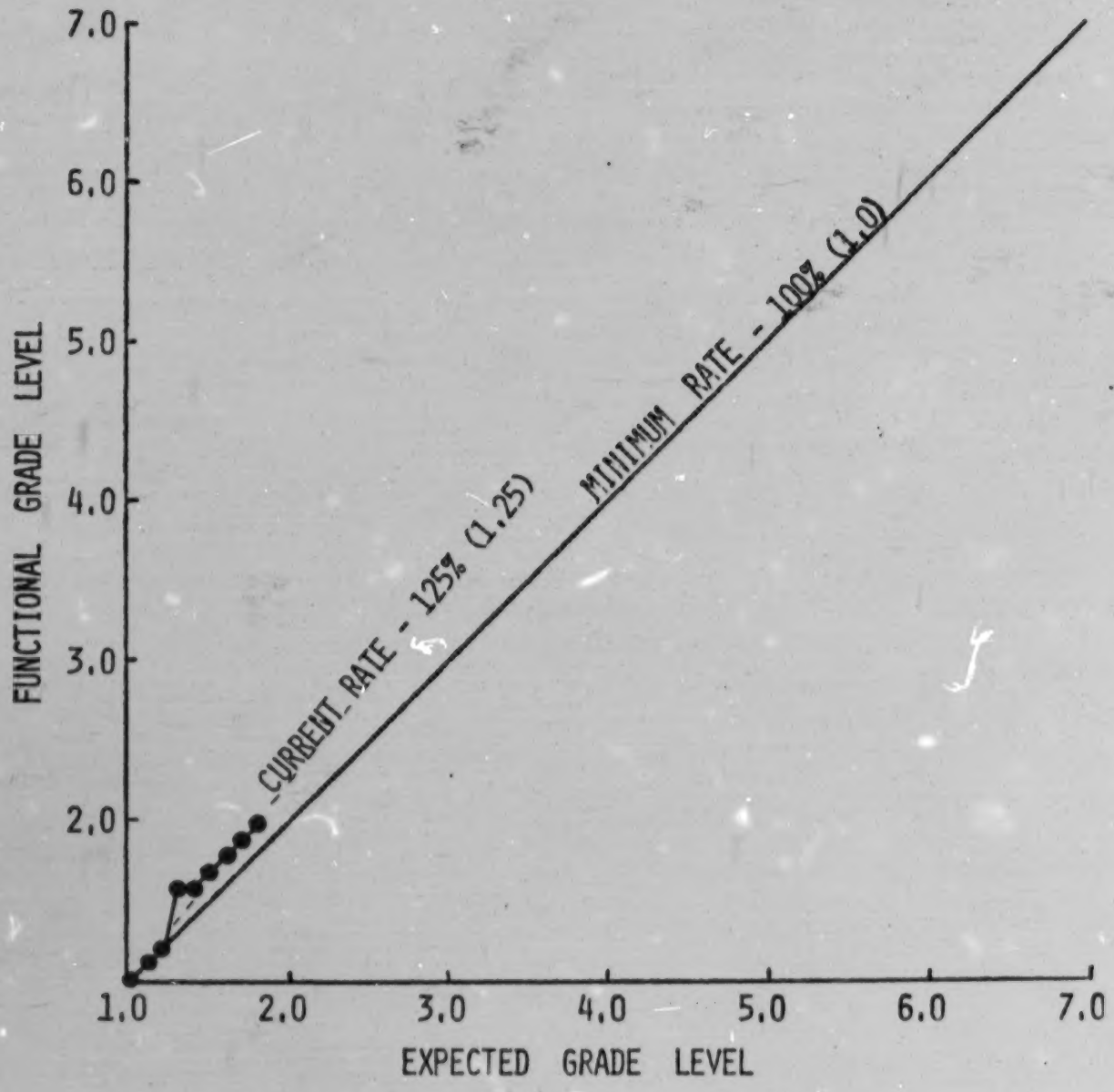

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Fig. 10 FIRST GRADE CHILD (# 6) BELOW MINIMUM RATE

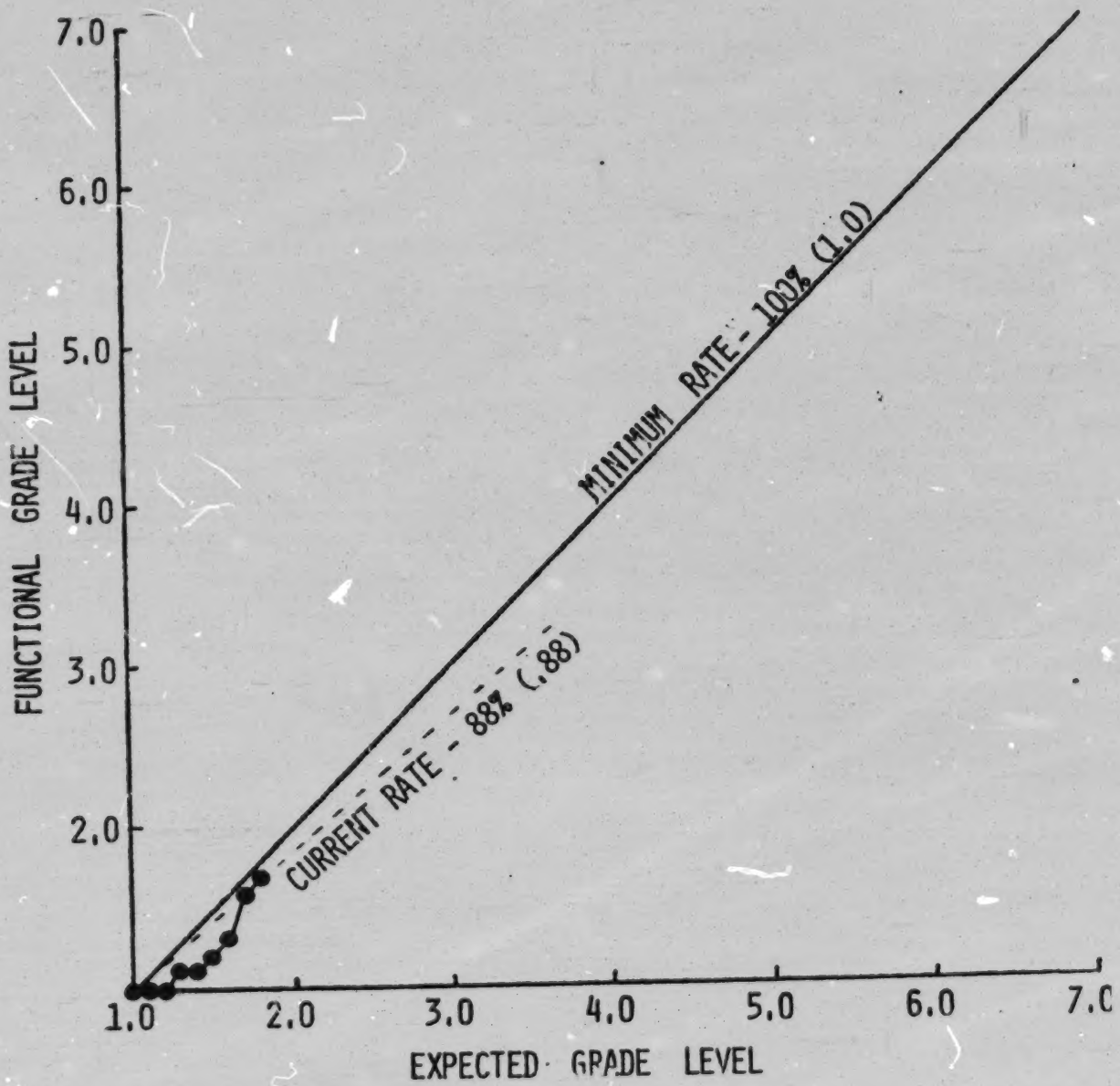

Table 1. Grade 1

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A	B	C	D	E	F	G
STUDENT * Entry after Sept.	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
1	1.0	1.4	.4		50	
2	1.0	2.0	1.0		125	
3	1.0	1.6	.6		75	
4	1.0					
5	1.0	1.9	.9		113	
6	1.0	1.7	.7		88	
7	1.0	2.2	1.2		150	
8	1.0	2.4	1.4		175	
9	1.0	1.7	.7		88	
*10		1.3				
11	1.0	1.7	.7		88	
12	1.0	1.9	.9		113	
13	1.0	1.7	.7		88	
14	1.0	1.7	.7		88	
15	1.0	1.2	.2		25	
16	1.0	1.7	.7		88	
17	1.0	1.6	.6		75	
18	1.0	2.0	1.0		125	
19	1.0	2.0	1.0		125	
20	1.0	1.3	.3		38	
21	1.0	1.6	.6		75	
22	1.0	2.0	1.0		125	
23	1.0	1.9	.9		113	
24	1.0	1.9	.9		113	
25	1.0	1.0	0		0	

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Table 2. Grade 1

A	B	C	D	E	F	G
STUDENT * Entry after Sept.	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
26	1.0	2.1	1.1		138	
27	1.0	1.3	.3		38	
28	1.0	1.2	.2		25	
29	1.0	2.4	1.4		175	
30	1.0	1.8	.8		100	
31	1.0	1.8	.8		100	
32	1.0	1.5	.5		63	
33	1.0	1.7	.7		88	
34	1.0	1.8	.8		100	
35	1.0	1.3	.3		38	
36	1.0	1.6	.6		75	
37	1.0	1.5	.5		63	
38	1.0	2.0	1.0		125	
39	1.0	1.8	.8		100	
40	1.0	1.9	.9		113	
41	1.0	1.8	.8		10	
42	1.0	1.9	.9		113	
43	1.0	1.3	.3		38	
44	1.0	2.0	1.0		125	
45	1.0	1.8	.8		100	
46	1.0	2.0	1.0		125	
47	1.0	1.7	.7		88	
48	1.0	1.4	.4		50	
*49	1.4	1.9	.5		167	

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FIRST-GRADE SUMMARY

The first-grade teachers were Pat Flood and Beth Splain. In January when Mrs. Splain left to have a baby, the student teacher, Judi Simon became her replacement. There were 48 students in the class in September. All were given an arbitrary grade level of 1.0, even though some would have placed lower had there been at the time a way to measure their level accurately. After the 8th time period, 24 students were on or above grade level, ranging from 1.8 to 2.4. The other 26 students were below grade level, ranging from 1.0 to 1.7.

SECOND-GRADE SUMMARY

The second-grade teachers were Shirley Giroux and Margaret McNeil. Of their 42 students, 24 began the year below grade level (2.0) in reading comprehension, ranging from 1.0 to 1.9. After the 8th time period, four of those who had started below grade level were on or above, the levels of those who were above ranging from 2.9 to 3.0. The levels of the students who were below grade level ranged from 1.3 to 2.7. There was an average percent increase of 44% for 15 of those students and an average decrease in percent for 8 students of 8%.

In summary, of the 43 students, 22 were on or above grade level after the 8th time period and the remaining 21 students who were below grade level ranged from 1.3 to 2.7.

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Fig. 11 SECOND GRADE CHILD ABOVE MINIMUM RATE

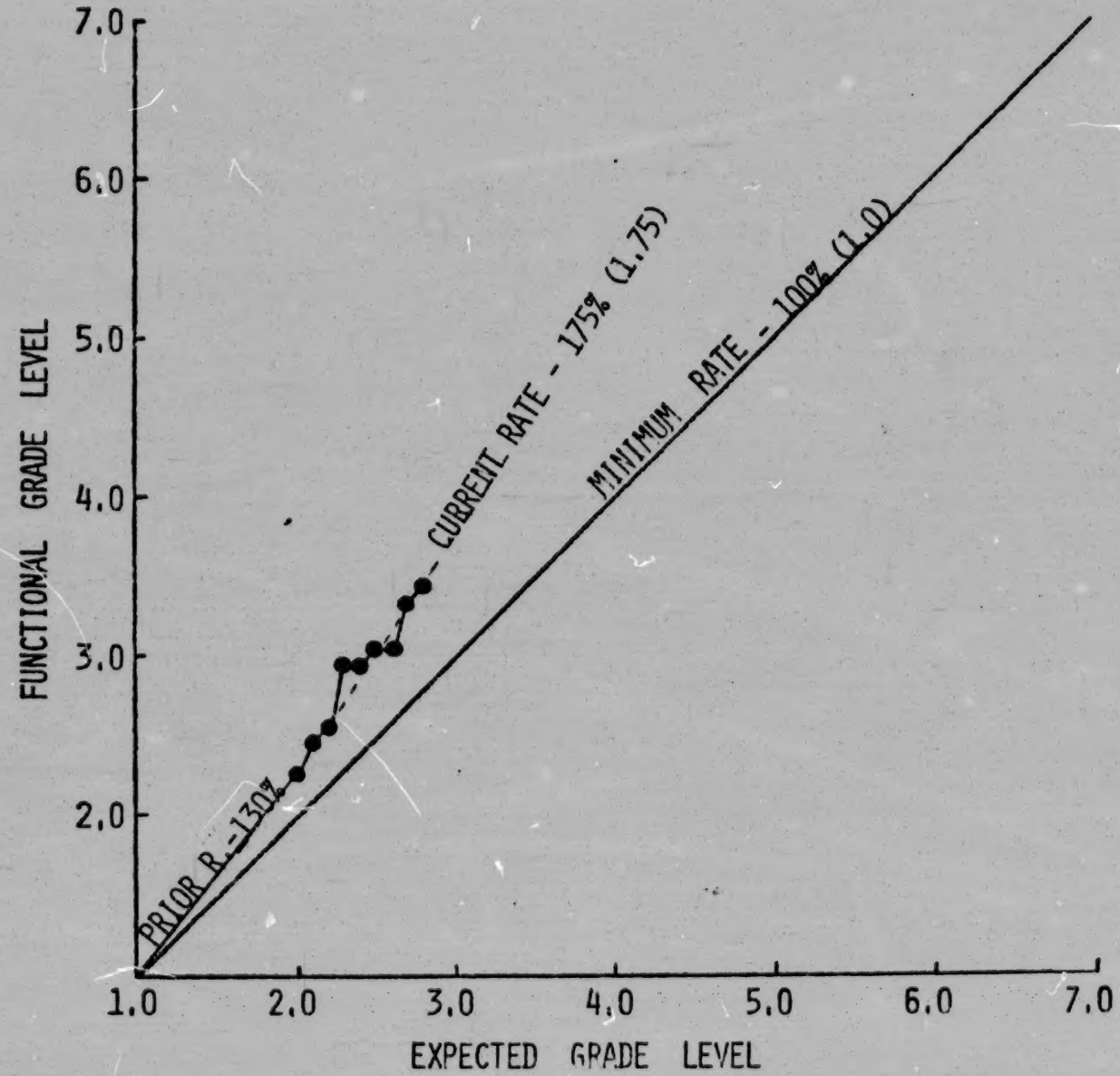

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Fig. 12 PROGRESS OF SECOND GRADE CHILD (#6) FROM BELOW TO ABOVE MINIMUM RATE

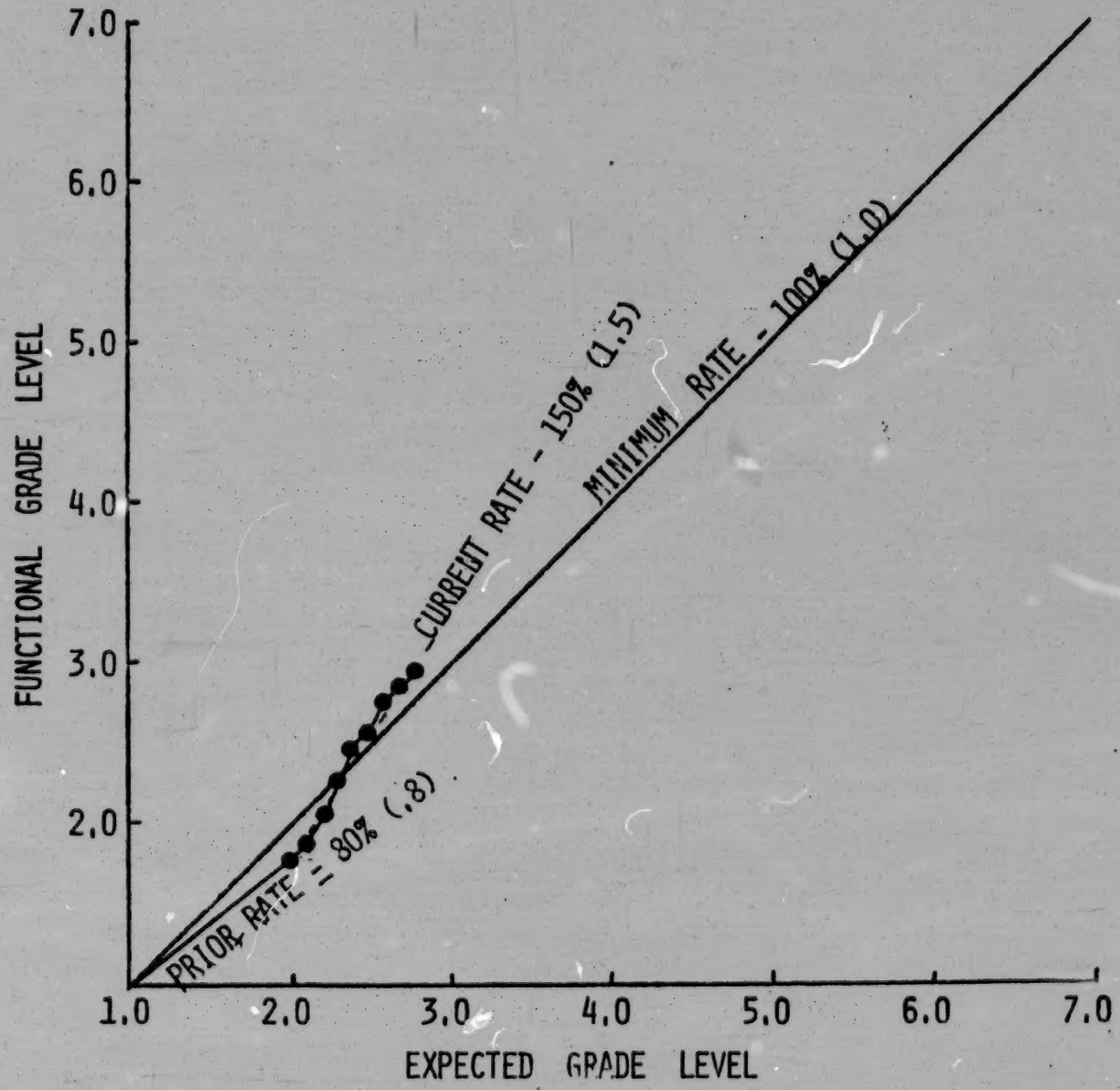

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Table 3. Grade 4

A	B	C	D	E	F	G
STUDENT * Entry after Sept.	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
1	1.9	2.6	.7	90	88	- 2
2	1.9	2.9	1.0	90	125	35
3	1.8	2.7	.9	80	113	33
4	1.9	2.5	.6	90	75	-15
5	1.9	3.0	1.1	90	138	48
6	1.8	3.0	1.2	80	150	70
7	1.9	2.9	1.0	90	125	35
8	1.4	2.1	.7	40	88	44
9	1.9	2.2	.3	90	33	-57
10	1.4	2.1	.7	40	88	48
*11	1.0	1.8	.8	0	134	134
12	1.8	2.4	.6	80	75	-5
13	1.3	1.9	.6	30	75	45
14	1.0	1.3	.3	0	38	38
15	1.8	2.4	.6	80	75	- 5
16	1.4	2.0	.6	40	75	35
17	1.3	1.9	.6	30	75	45
18	1.9	2.5	.6	90	75	-15
19	1.6	2.2	.6	60	75	15
20	1.4	2.1	.7	40	88	48
21	2.0	2.6	.6	100	75	-25
22	1.3	1.7	.4	30	50	20
23	1.9	2.5	.6	90	75	-15
24	1.9	2.6	.7	90	88	- 2
25	1.3	1.6	.3	30	38	8

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Fig. 13 THIRD GRADE CHILD ABOVE MINIMUM RATE

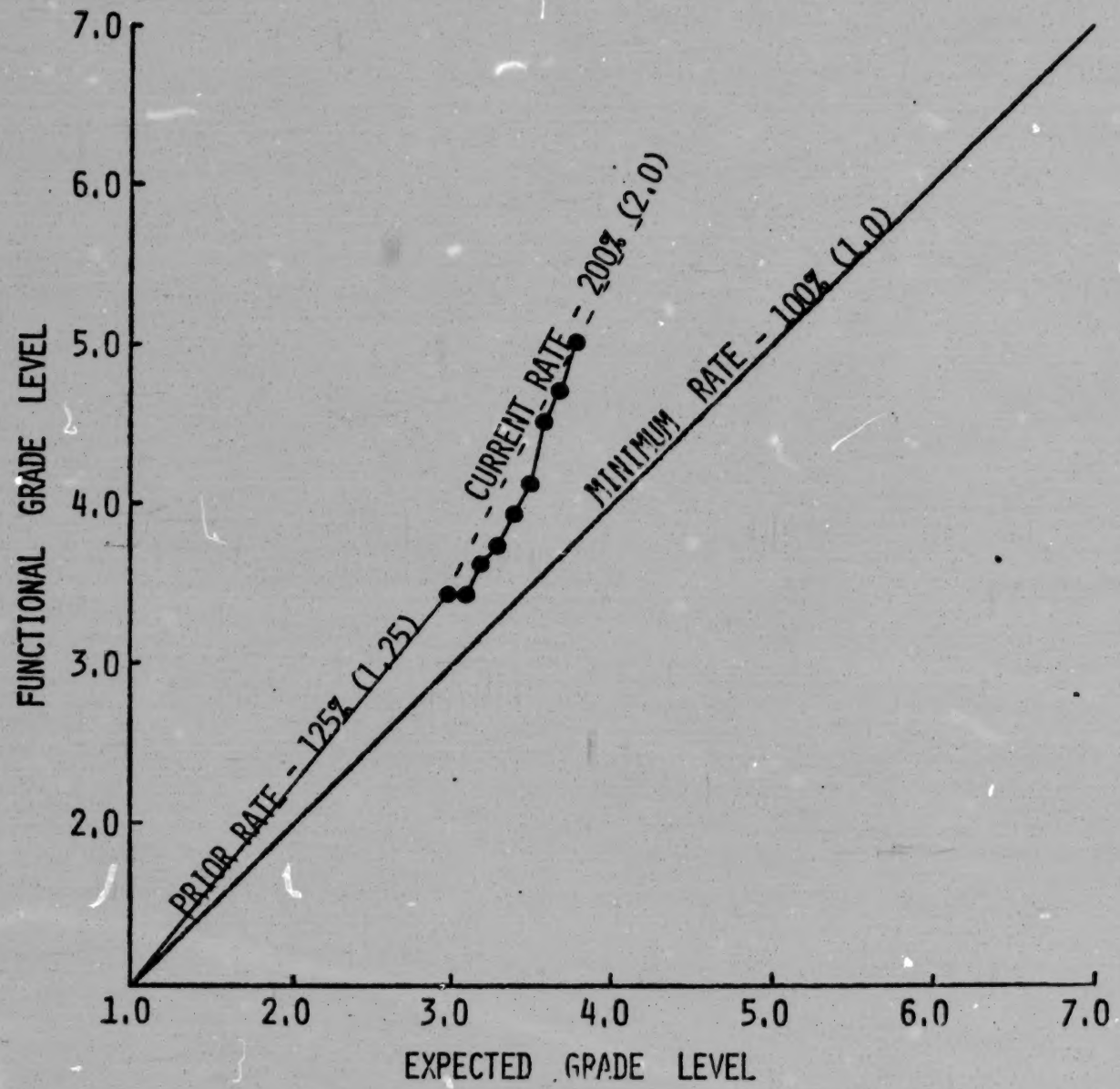

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Fig. 14 PROGRESS OF THIRD GRADE CHILD (#5) FROM BELOW TO ABOVE MINIMUM RATE

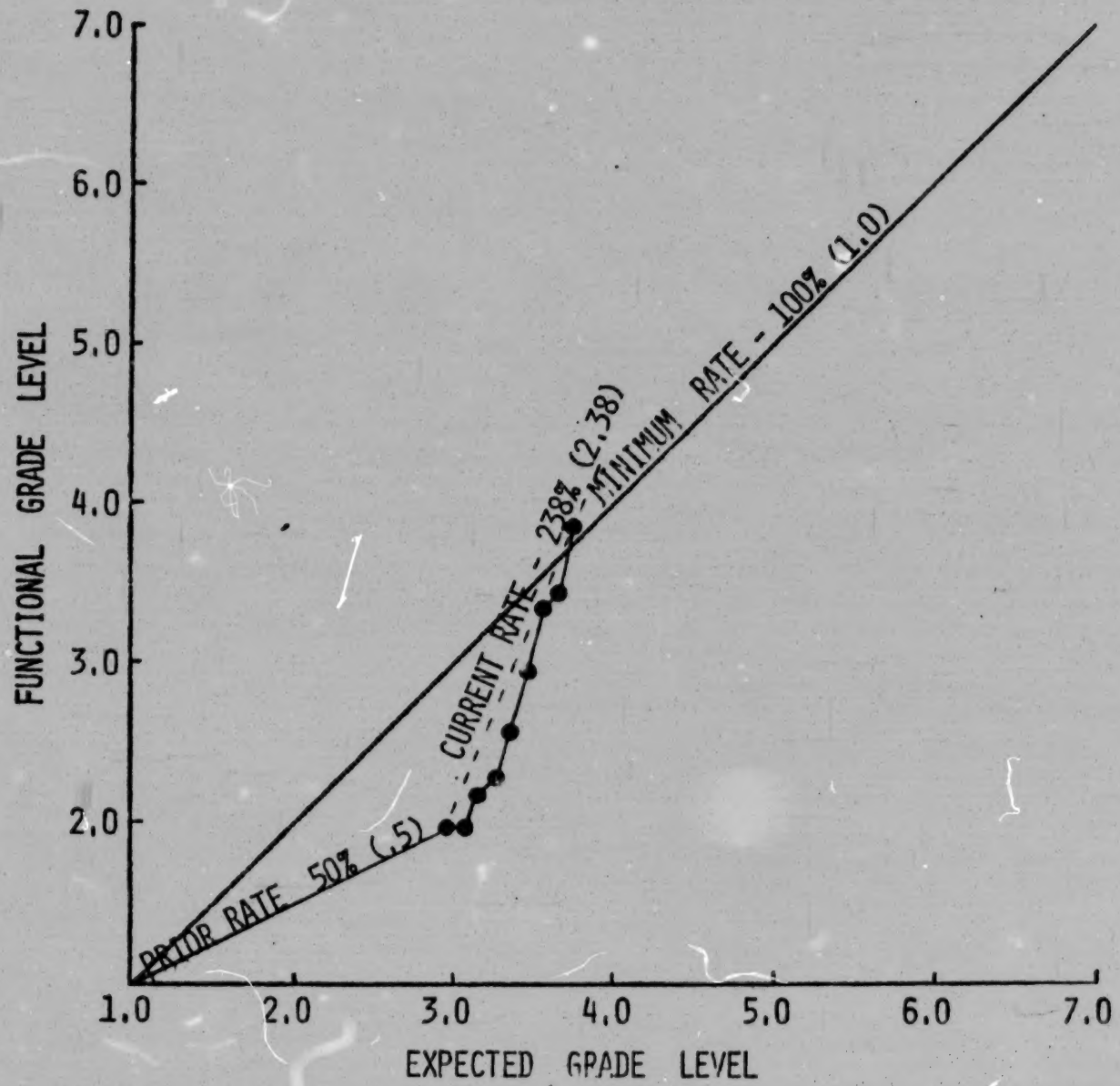

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Table 4 Grade 8

A	B	C	D	E	F	G
STUDENT	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
1	1.3	2.7	1.4	15	175	160
2	2.5	4.8	2.3	75	288	213
3	2.5	4.3	1.8	75	225	150
4	2.5	4.1	1.6	75	200	125
5	2.0	3.9	1.9	50	238	188
6	2.5	3.8	1.3	75	163	88
7	2.0	4.4	2.4	50	300	250
8	2.5	4.3	1.8	75	225	150
9	1.3	2.6	1.3	15	163	148
10	1.5	3.8	2.3	25	288	263
11	1.3	3.6	2.3	15	288	273
12	1.3	2.8	1.5	15	188	173
13	2.5	4.6	2.1	75	263	188
14	2.5	4.2	1.7	75	213	138
15	1.2	1.4	.2	10	25	15
16	2.5	4.2	1.7	75	213	138
17	1.5	2.6	1.1	25	138	113
18	2.0	3.6	1.6	50	200	150
19	1.3	3.2	1.9	15	238	183
20	1.3	2.6	1.3	15	163	148
21	1.5	2.7	1.2	25	150	125
22	2.5	4.8	2.3	75	288	213
23	1.3	3.6	2.3	15	288	273
24	1.3	2.6	1.3	15	163	148
25	2.5	4.2	1.7	75	213	138

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THIRD-GRADE SUMMARY

The third-grade teachers were Arlene Moore and Michael Bonavita. Of their 46 students, 25 began the year below grade level (3.0) in reading comprehension, ranging from 1.3 to 2.5. After the 8th time period, 13 of those who had started below grade level were on or above, ranging from 3.8 to 4.8. The levels of the remaining students who were still below grade level ranged from 2.6 to 3.6 except for one child whose reading comprehension level was 1.4. The average increase in percent growth this year over the previous years in school for these 11 children was 172%. The children who started the year on or above grade level ranged from 3.0 to 4.5. After 8 time periods they ranged throm 4.5 to 6.0+.

In summary, of the 46 students, 34 were on or above grade level after the 8th time period and remaining 12 students below grade level ranged from 1.4 to 3.6.

FOURTH-GRADE SUMMARY

The fourth-grade teachers were Particia Coleman and Kathleen Kazuba. Of their 54 students, 22 began the year below grade level (4.0) in reading comprehension, ranging from 2.2 to 3.6. After the 8th time period (April 17), 7 of those who had started below grade level were on or above, ranging from 4.8 to 5.0. The levels of the remaining students who were still below grade level ranged from 3.0 to 4.7. The average increase in percent growth this year over the previous years for 21 students was 122% and the average decrease in percent growth for two students was 7.5% The children who started the year on or above grade level and remained on or above grade level ranged from 4.0 to 5.0 in

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Fig. 15 FOURTH GRADE CHILD ABOVE MINIMUM RATE

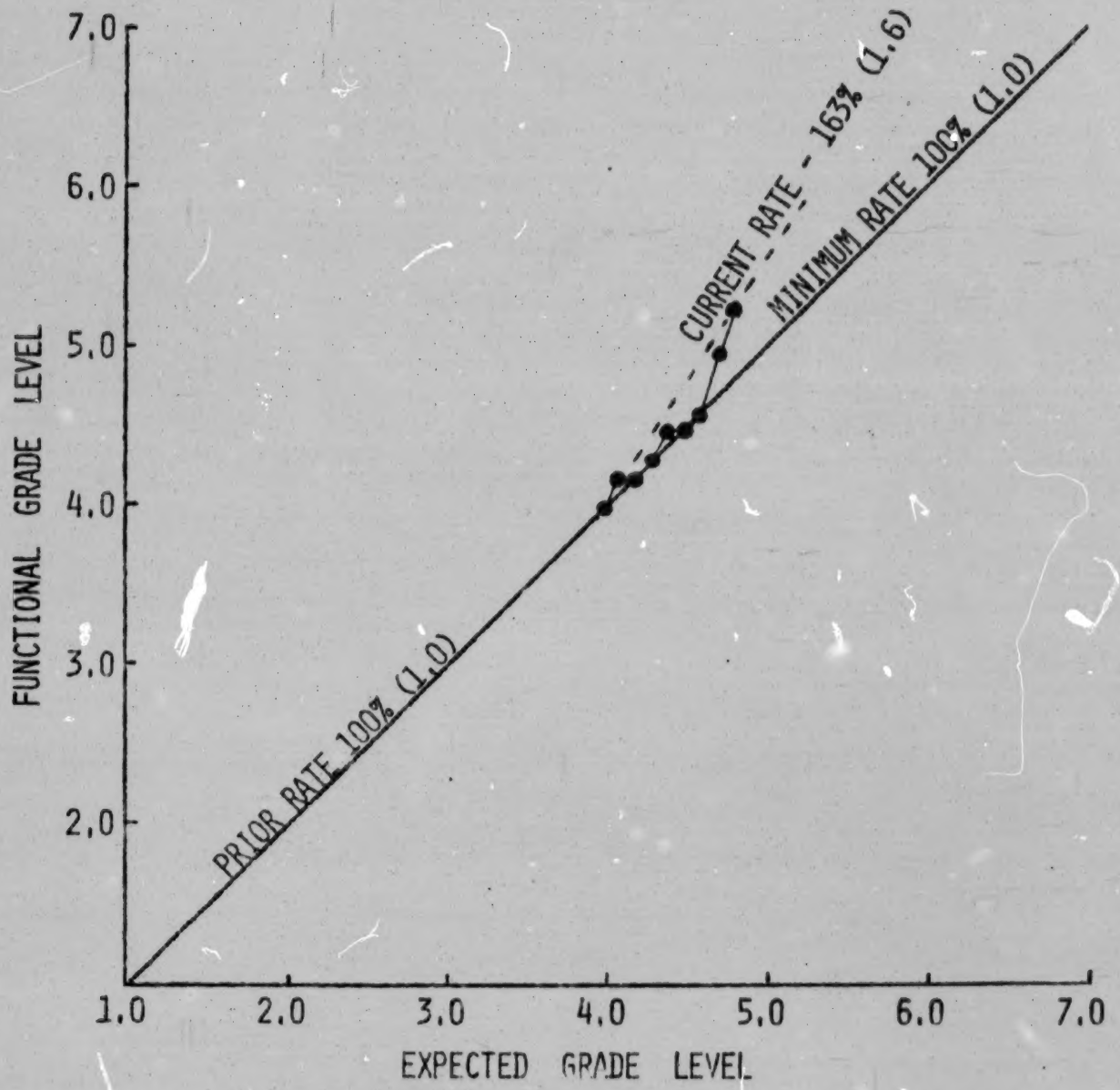

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Fig. 16 FOURTH GRADE CHILD (#21) BELOW MINIMUM RATE

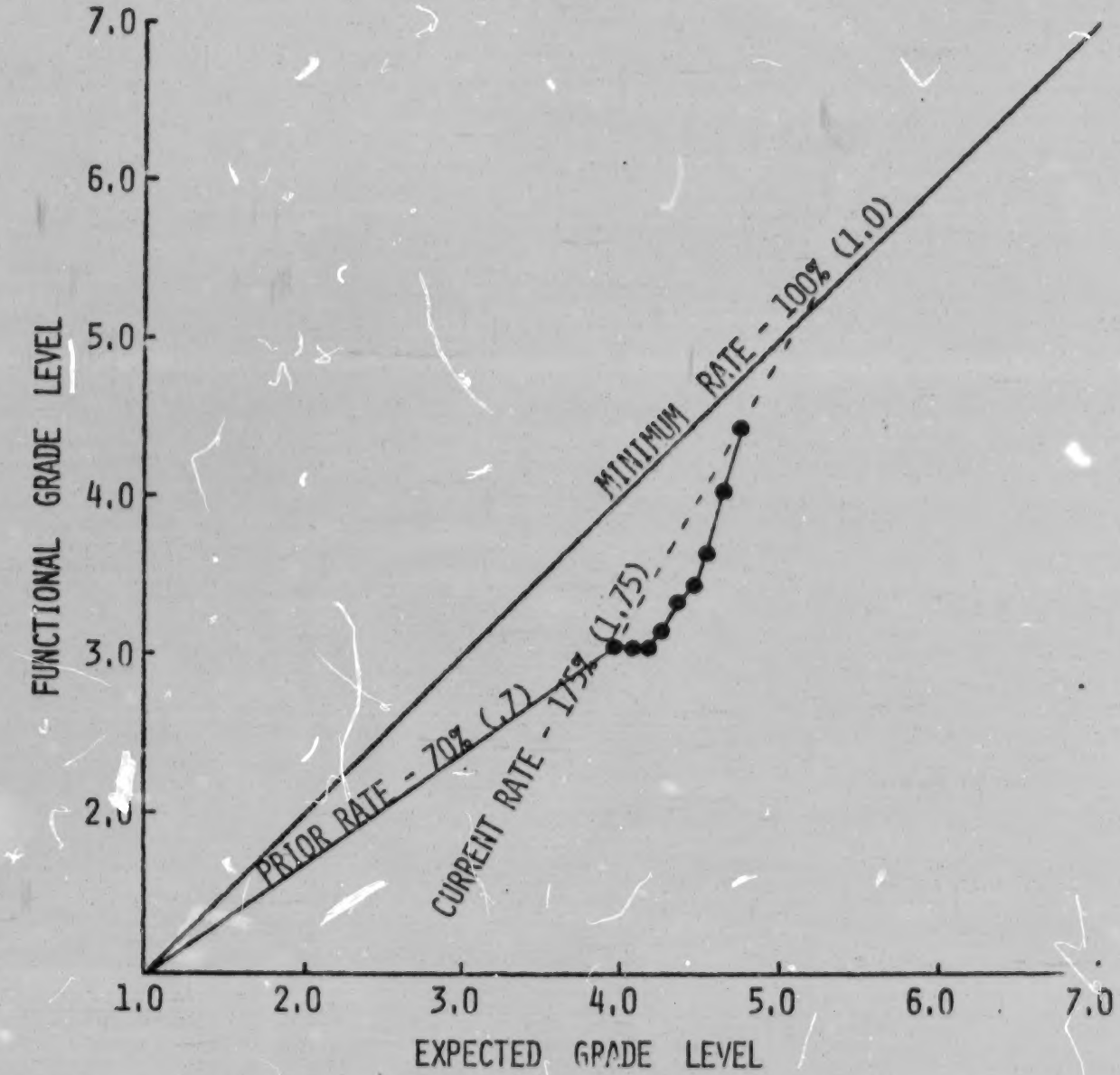

Table 5, Grade 4

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A	B	C	D	E	F	G
STUDENT	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
1	3.1	5.0	1.9	70	238	168
2	3.1	4.0	.9	70	113	43
3	2.6	3.0	.4	53	50	- 3
4	2.6	4.4	1.8	53	225	172
5	3.0	4.8	1.8	68	225	157
6	2.6	4.4	1.8	53	225	172
7	2.6	4.4	1.8	53	225	172
8	2.3	3.5	1.2	43	150	107
9	3.5	4.6	1.1	83	138	55
10	3.5	5.0	1.5	83	188	105
11	3.0	5.0	2.0	68	250	182
12	3.1	3.7	.6	70	75	5
13	3.1	4.3	1.2	70	150	80
14	4.0	4.7	.7	100	88	-12
15	2.3	4.0	1.7	43	213	170
16	3.1	5.0	1.9	70	238	168
17	3.5	4.4	.9	83	113	30
18	3.6	4.8	1.2	87	150	63
19	2.3	4.3	2.0	43	250	207
20	3.5	5.4	1.9	83	238	155
21	3.1	4.5	1.4	70	175	105
22	2.2	4.2	2.0	40	250	210
23	2.3	3.0	.7	43	88	45

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September and ranged from 4.8 to 6.0 in April.

In summary, of the 54 students, 38 were on or above grade level after the 8th time period and the remaining 16 students below grade level ranged from 3.0 to 4.7.

FIFTH-GRADE SUMMARY

The fifth-grade teachers were Ann Baker and Gilbert Pierce. Of their 54 students, 19 began the year below grade level (5.0) in reading comprehension, ranging from 2.0 to 4.6. After the 8th time period, 3 of those who had started below grade level were on or above, ranging from 5.8 to 6.0. There were then 18 students who were still below grade level, ranging from 2.7 to 5.7. The average percent growth increase this year over previous years for 16 children was 97%. There were three children who had a percent growth decrease of an average of 10%. The children who started and ended the year on or above grade level ranged from 5.0 to 6.0 in September and 5.8 to 7.8 in April.

In summary, of the 54 students, 36 were on or above grade level after the 8th time period and the remaining 18 students who were below grade level ranged from 2.9 to 5.7.

SIXTH-GRADE SUMMARY

The sixth-grade teachers were Marybeth Pree, Judith LaForge, and Helen Cloutier. Of their 67 students, 41 began the year below grade level (6.0) in reading comprehension, ranging from 1.8 to 5.5. After the 8th time period, the levels of these students ranged from 3.3 to 7.3. Every one of these students had increased in percent growth this year from previous years. The average increase in percent growth for these 41 children was 102%. The children who started the

Fig. 17 TYPICAL FIFTH GRADE CHILD ABOVE MINIMUM RATE

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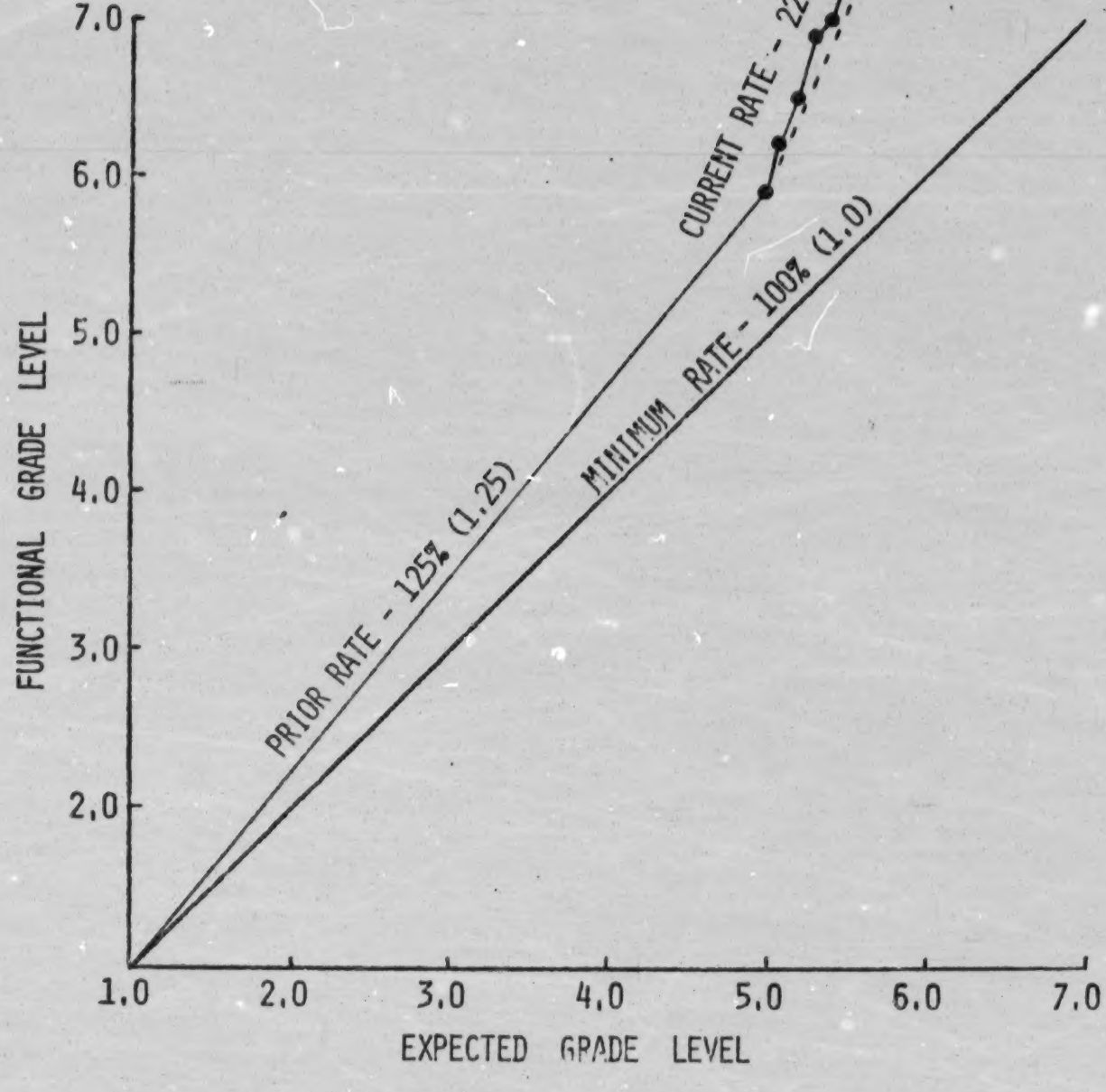

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Fig. 18 FIFTH GRADE CHILD (#19) BELOW MINIMUM RATE

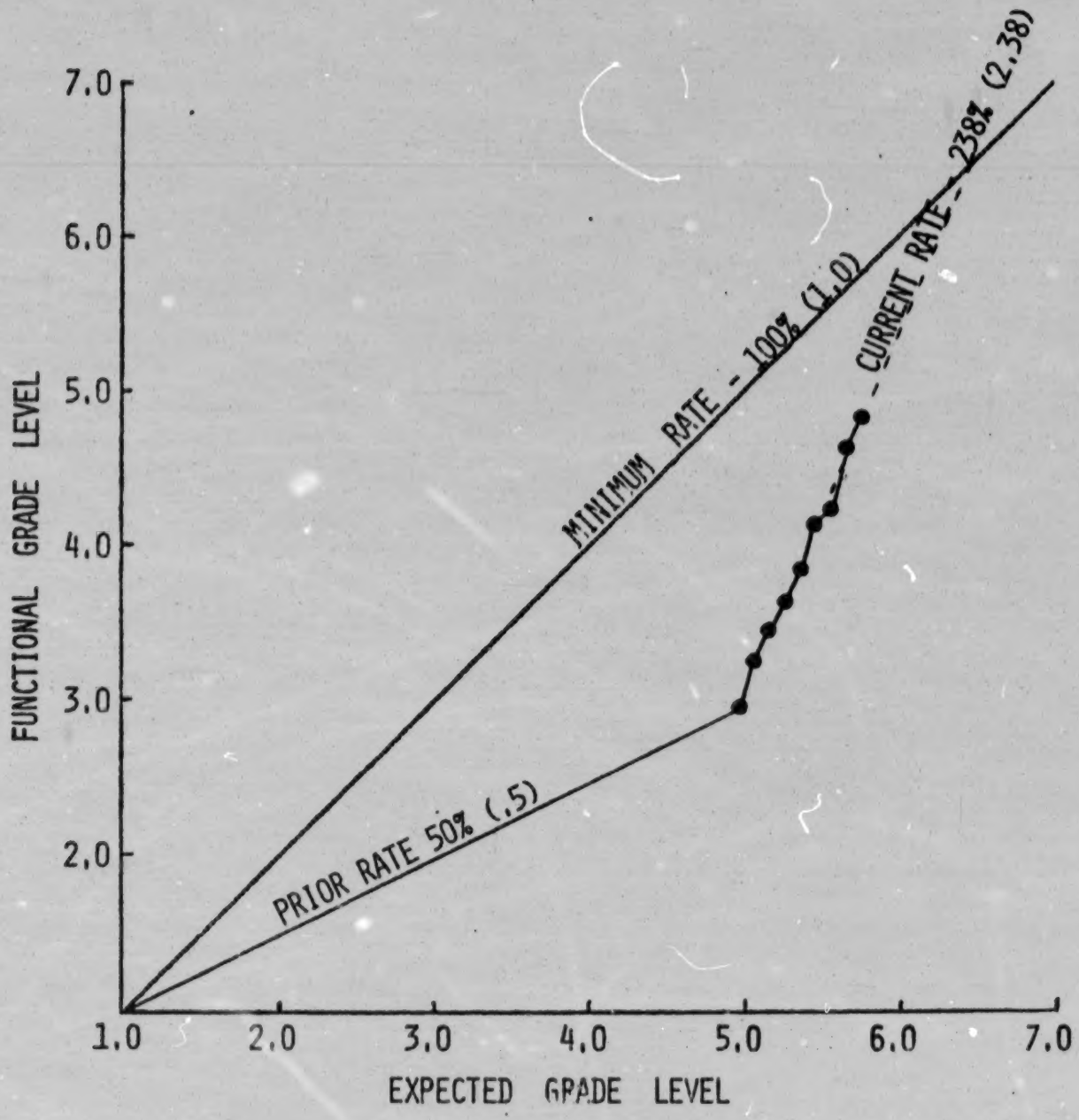

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Table 6. Grade 5

A	B	C	D	E	F	G
STUDENT	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
1	2.1	3.5	1.4	28	175	147
2	5.0	5.7	.7	100	88	-12
3	5.0	5.7	.7	100	88	-12
4	2.0	2.9	.9	25	113	88
5	4.4	5.8	1.4	85	175	90
6	3.6	5.8	2.2	65	275	210
7	4.2	5.0	.8	80	100	20
8	2.1	2.7	.6	28	75	47
9	4.3	6.0	1.7	83	213	130
10	3.3	3.7	.4	58	50	- 8
11	4.1	5.7	1.6	78	200	122
12	4.1	5.3	1.2	78	150	72
13	2.1	2.9	.8	28	100	72
14	4.1	5.5	1.4	78	175	97
15	2.1	3.4	1.3	28	163	135
16	4.1	5.2	1.1	78	138	60
17	3.0	4.0	1.0	50	125	75
18	2.5	3.7	1.2	38	150	112
19	3.0	4.9	1.9	50	238	188
20	4.6	5.6	1.0	90	125	35
21	4.3	5.3	1.0	88	125	37

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Fig. 19 SIXTH GRADE CHILD ABOVE MINIMUM RATE

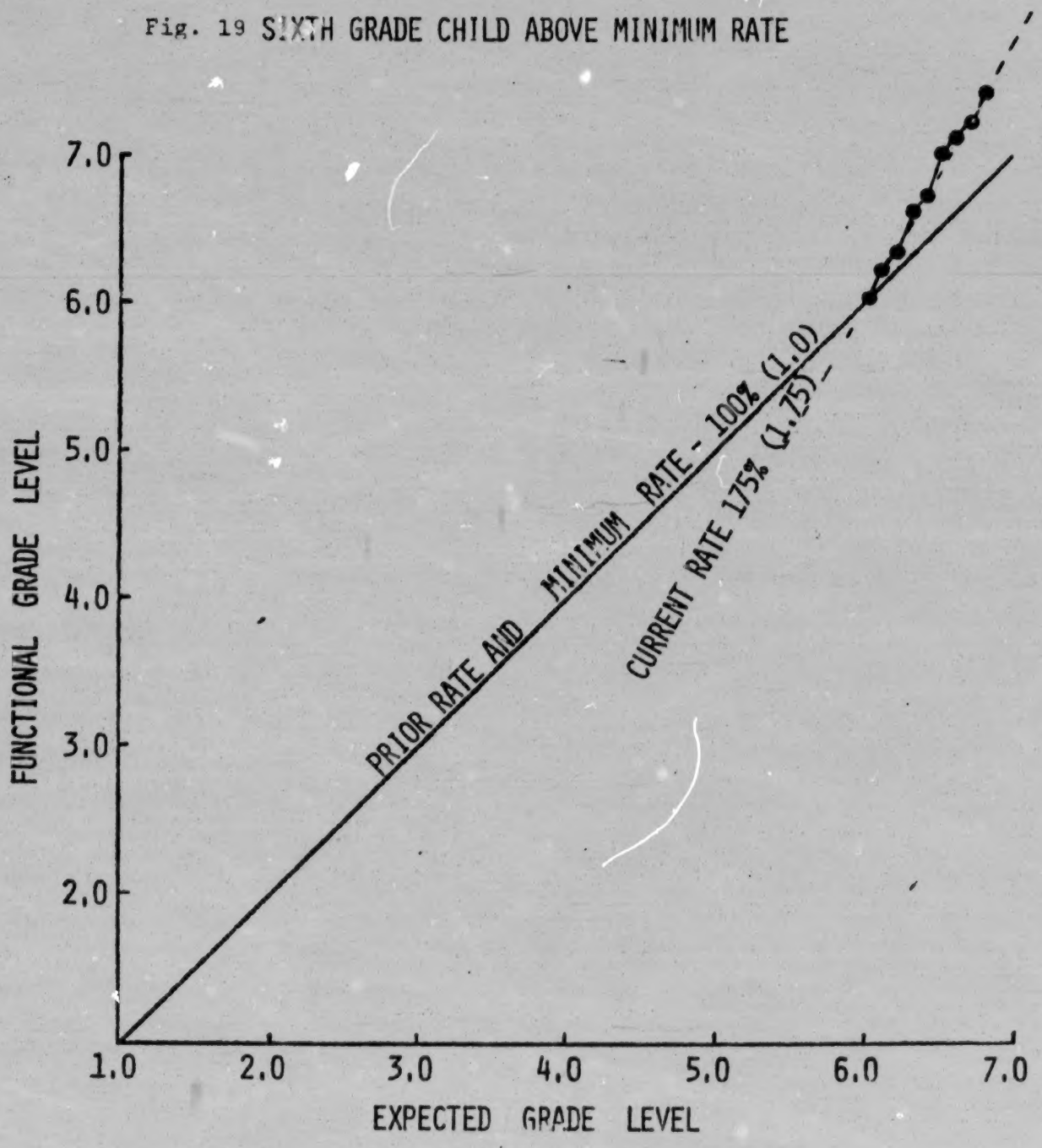

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Fig. 20 PROGRESS OF SIXTH GRADE CHILD (# 21)
TOWARD MINIMUM RATE LINE

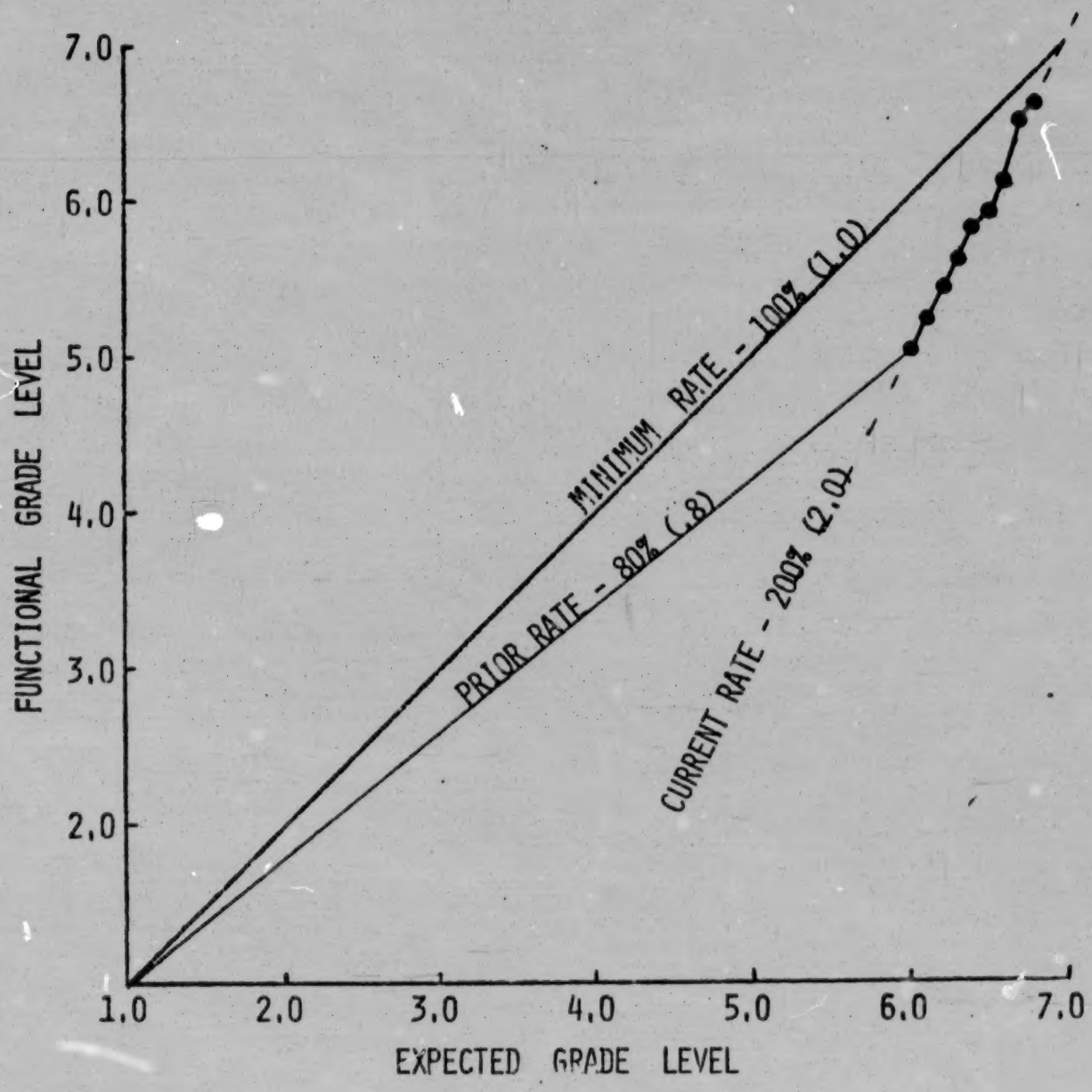

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Fig. 21 PROGRESS OF SIXTH GRADER (#27) WHO COULD REACH MINIMUM RATE LINE BY END OF 8TH GRADE

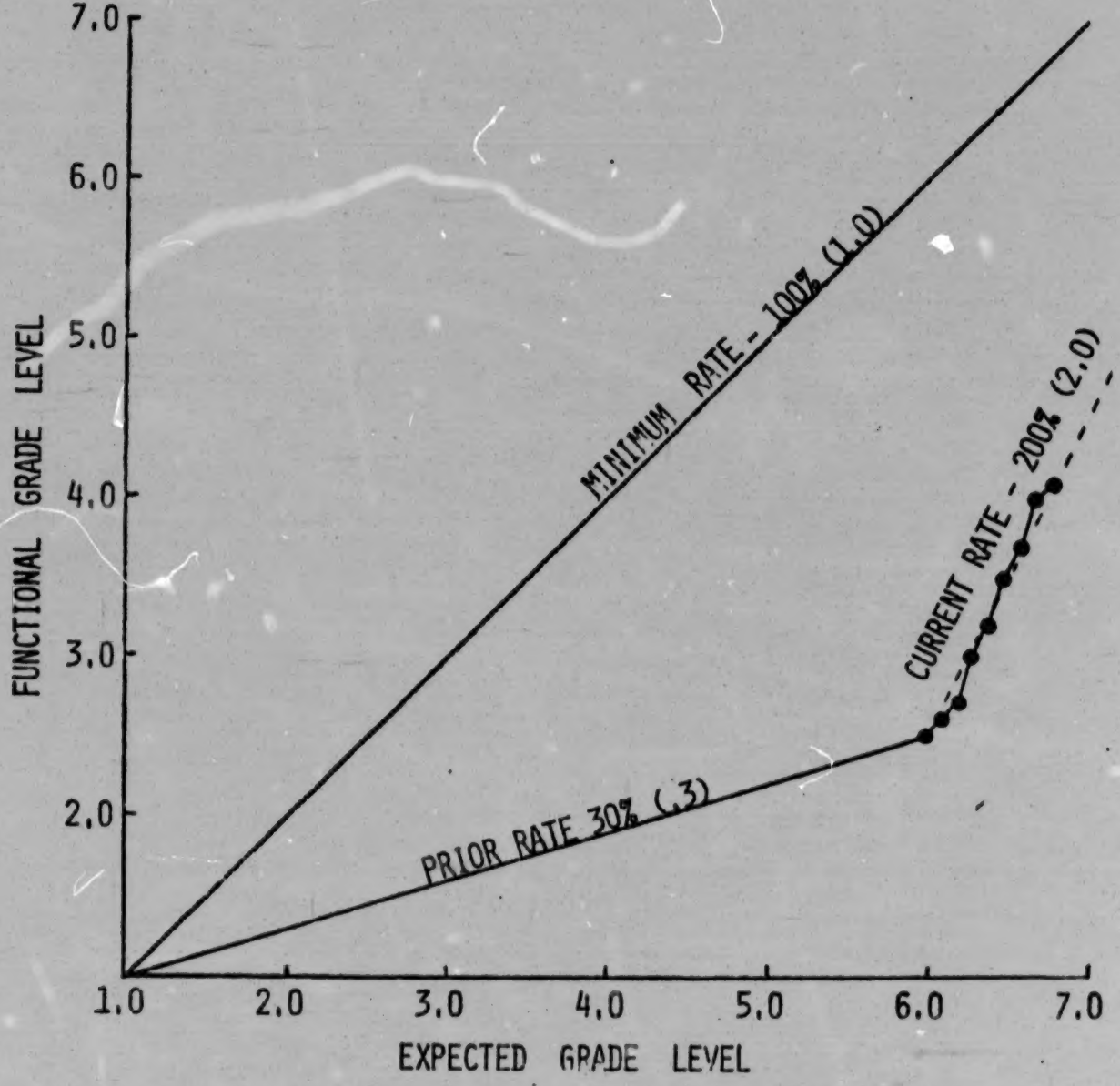

Table 7. Grade 6

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A	B	C	D	E	F	G
STUDENT * Entry after Sept.	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
1	4.0	4.7	.7	60	88	28
2	3.5	5.2	1.7	50	212	162
3	5.0	6.2	1.2	80	150	70
4	3.5	5.1	1.6	50	200	150
5	5.0	6.2	1.2	80	150	70
6	5.5	7.3	1.8	90	225	135
7	3.5	4.8	1.3	50	163	113
8	5.0	6.3	1.3	80	163	83
*9	3.5	4.2	.7	50	100	50
10	5.0	5.9	.9	80	113	33
11	5.0	6.1	1.1	80	138	58
12	5.0	6.5	1.5	80	188	108
13	5.0	6.2	1.2	80	150	70
14	4.0	5.3	1.3	60	163	103
*15	5.7	6.2	.5	94	167	73
16	3.5	4.6	1.1	50	138	88
17	4.0	5.8	1.8	60	225	165
*18	5.4	6.0	.6	85	120	35
19	3.5	4.5	1.0	50	125	75
20	2.5	3.3	.8	30	100	70
21	5.0	6.6	1.6	80	200	120
22	2.5	3.6	1.1	30	138	108
23	4.0	5.3	1.3	60	163	103
24	3.5	5.7	2.2	50	275	225

Table 8. Grade 6

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A	B	C	D	E	F	G
STUDENT * Entry after Sept.	ENTRY READING LEVEL	8TH TIME PERIOD READING LEVEL	READING GROWTH THROUGH 8TH TIME PERIOD	PERCENT GROWTH PRIOR TO CURRENT YEAR	PERCENT GROWTH DURING CURRENT YEAR THROUGH 8TH TIME PERIOD	DIFFERENCE IN PERCENT GROWTH THIS YEAR FROM PREVIOUS YEARS
25	5.0	6.5	1.5	80	188	108
26	4.0	5.1	1.1	60	138	78
27	2.5	4.1	1.6	30	200	170
28	2.5	4.1	1.6	30	200	170
29	5.0	6.5	1.5	80	188	108
30	5.0	6.1	1.1	80	138	58
31	2.0	3.7	1.7	20	213	193
32	4.0	6.0	2.0	60	250	190
33	1.8	3.3	1.5	16	188	172
*34	4.3	4.9	.6	62	100	38
35	2.5	3.8	1.3	30	163	133
36	5.0	6.1	1.1	80	138	58
37	5.0	6.2	1.2	80	150	70
38	3.5	4.3	.8	50	100	50
39	2.5	3.8	1.3	30	163	133
40	2.5	3.4	.9	30	112	82
*41	4.4	5.1	.7	64	140	76

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year on or above grade level all started at 6.0. After 8 time periods they ranged from 6.9 to 7.4.

In summary, of the 67 students, 27 were on or above grade level after the 8th time period and the remaining 40 students below grade level ranged from 3.3 to 6.6.

SECOND-SIXTH GRADE SUMMARY

In summary, of the 265 students in grades two through six, 131 students (50%) were below grade level in reading comprehension at entry level. After the 8th time period (April 17), 107 were below. The average growth of these students prior to the current year in terms of the percent growth in reading comprehension, was 59%. The percent growth of these students through the 8th time period was 157% 122 students (90% of the deficit students) had an increase in percent growth (the difference between prior percentage and this year's percentage) of 109%. 13 students (10% of the deficit students) had a decrease in percent growth of 14%.

Thus, the minimum objective system seemed to effect a substantial increase in the rate of mastering objectives in reading comprehension for 90% of the deficit students.

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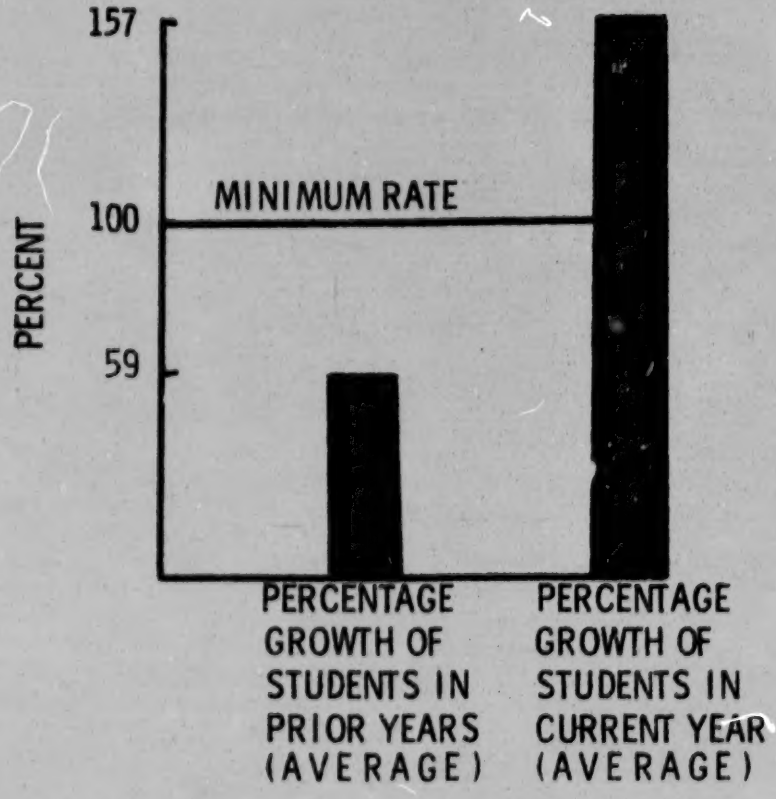
Fig. 22 PROGRESS OF CHILDREN GRADES 2-6 WHO WERE BELOW GRADE LEVEL (50%)



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DISCUSSION

There were difficulties encountered by the teachers in the implementation of the minimum objective system that inspired them to make many changes in their objectives for next year. In the kindergarten, the teachers were overly ambitious in writing 213 objectives which made the monthly measurement unwieldy (see Appendix I). Their experience this year however, made it much easier to zero in on 125 realistic minimum objectives that will be used for next year (see Appendix A). The kindergarten teachers felt that the objectives they derived for this year were far too restrictive, partly because of the quantity. They had to spend too much time testing and not enough time teaching. Hopefully, the revisions will eliminate these problems for next year.

Another difficulty appeared in October when teachers expressed the feeling of being "locked into" the minimum objectives. They reported that children, too, were feeling the stress of completing a certain amount of work in a specified amount of time. After meeting with the consulting teachers and discussing the problem, a system was devised such that if a child could demonstrate that he could meet criteria at a certain level, he should not be required to complete every activity at that level before he could advance to the next level. Thus, his rate could be accelerated.

The 1.0 entry reading level for all first graders represents an arbitrary placement since no prior objective measures were available on these children. In fact, many of the children placed on the 1.0 entry level might have been, if compared with this year's kindergarten objectives, substantially below the

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1.0 level. Therefore, the reading growth shown for the first 8 time periods may not reflect an accurate picture of the growth rate since the children's entry levels may have been much lower.

In the second grade seven children were sufficiently deficit that the teachers, consulting teachers and other special educators believed those children needed special programs in all language arts areas. Since this could not be carried out by the classroom teachers alone, the Special Education Area of the University of Vermont provided funding to hire two fulltime instructional aides to be trained by these specialists to implement the programs developed. These intervention procedures are reported as case studies starting on page 51.

The third-grade teachers found the minimum objective system a useful tool in implementing an accountable plan for teaching basic skills. It increased their efficiency and thus enabled them to provide many creative enrichment activities for their children. Specifically, they published a newspaper, produced plays, cooked, provided many "hands-on" science experiences and, in general, created an atmosphere of a happy, busy classroom.

In addition to the minimum objective project, the fourth grade has been doing research in the area of spelling. Results of these studies are being used to develop and implement procedures for teaching spelling in next year's fourth grade class.

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After administering a standardized test in April, the fifth grade teachers became concerned with the large discrepancies between minimum objective measures and the measures obtained in reading on the standardized test. Therefore, they prepared and implemented an experiment involving change of conditions in the standardized testing situation. The results indicated that the manipulations that they made affected the scores on the standarized test (Pierce, Baker, 1974).

The sixth grade developed an intensive language arts remediation program for 17 students who were performing far below the minimum rate. After implementing the procedures, each student progressed at a greatly accelerated rate toward the minimum rate line.

Teachers in all grades decided to revise their objectives for next year. This year their reading objectives were book oriented, that is, the children were expected to read and comprehend the content of books designated to be at a certain grade level. However, in applying the readability formulas derived by several publishers, it was found that there was a good deal of descrepancy in the difficulty of most books which were supposedly of the same grade level (Fry, 1968)(Botel, 1962) (Dale-Chall, 1946). Therefore, the teachers have all rewritten their objectives as skills to be accomplished. These objectives can be used with any books whose content includes the skills. (See Appendix B)

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There are three questions that one might ask in regard to the implementation of the minimum objective system in the Hinesburg Elementary School:

1. Was it effective in that it made appreciable changes in the learning growth of the children?

The data show that 90% of the deficit children averaged an improvement this year of 109% over previous years. 10% of the deficit children slowed down 14% in their learning rates. The data also show that most of the children who were on or above the minimum objectives also progressed at an accelerated pace. Thus, the conclusion may be drawn that the system was effective.

2. Was the implementation of the system efficient in that it did not cost more in time and money than it was worth?

The question might well be asked -- how much time was consumed in the data collecting and graphing necessary to carry on the minimum objective system? In the Hinesburg School data recording was done daily by all teachers. Graphing was done by some teachers, however most of the teacher's graphing of her weekly or monthly data and all of the graphing for the six year graphs in language and mathematics was done by the technician. This took approximately 20 hours per month for the first four measurement periods for the technician. It also became apparent that a data sheet was more functional in keeping track of some behaviors than a graph. Consequently, the time spent by the technician was cut down by several hours per month.

How many auxilliary personnel were required to implement the system? There was a SEA technical associate working half-time in Hinesburg who handled the data , implemented special

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tutoring procedures for six children, and produced working units to go with various texts for the teachers. There was a technical assistant who tutored many children and performed the massive typing tasks necessary. The technical assistant has been trained to take over the data recording duties of the technical associate for next year. In addition, there were two full-time aides hired to instruct seven children in the second grade and one who instructed a third-grade child. There were also three aides each shared by three classrooms and a consulting teacher aide.

3. Was the general feeling of the teachers about the system positive enough for them to think it was worth all the time and effort?

On the following page is a POSITIVE AFFECT QUESTIONNAIRE, which was filled out by the teachers in May, asking them how they felt about certain aspects of the minimum objective system. The responses shown on the bottom of the page indicate that their feelings were, in general, far more positive than negative.

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POSITIVE AFFECT QUESTIONNAIRE

	Very definitely		No opinion		Definitely not
1. Do you think the minimum objective system has been a useful tool this year?	1	2	3	4	5
2. Has the system been worth the effort for you?	1	2	3	4	5
3. Do you think the minimum objective system helped in keeping you aware of the progress or lack of progress of your children?	1	2	3	4	5
4. Do you think the MO system has affected positively creativity in your classroom?	1	2	3	4	5
5. Has the use of the monthly data proved to be in general a pleasant experience?	1	2	3	4	5
6. Has the use of the monthly data helped you to decide to make changes in instructional programs?	1	2	3	4	5
7. If given a choice, would you choose to continue with minimum objectives?	1	2	3	4	5
8. Have you had a pleasant relationship with the data taker?	1	2	3	4	5

	NUMBER OF RESPONS				
1.	5	4			1
2.	5	4	1		1
3.	8	1			1
4.	2	3	2	2	1
5.	2	4	1	1	2
6.	5	5			
7.	5	5			
8.	4	3	2		

CASE STUDIES

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SUBJECTS AND SETTING

Ken, Tom, Steve, Frank, Art, Linda and Rob were seven-year-old second graders in an open classroom of 44 children. The class was taught by a team of two teachers, with student teachers and an aide present on occasion.

GROUP REFERRAL PROBLEM

After several weeks in school, it became evident that, because of their severe learning deficits, these seven children required so much of the teachers' time individually that the total class program was placed in jeopardy. This problem was brought to the attention of the principal and the consulting teachers. They all agreed that without much individual instruction, these children would not progress at the rate necessary to achieve the minimum objectives. Two full-time and one half-time tutors were hired and trained to work with these children individually in a way which would deviate as little as possible from normal classroom procedures.

GROUP INSTRUCTIONAL OBJECTIVES

All school special education personnel cooperated to provide programs in all deficit areas. The following objectives were derived for all seven children and instruction to meet these activities was provided in group teaching situations:

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Group Objective 1 - Reading for a Purpose

Given the opportunity at least 3 times a week to listen to the tutor 1) discuss points of interest on a page, 2) give directions to look for people, things, or actions, 3) read the page or story, 4) ask questions, and 5) give cues to help the child respond,	the child will sit quietly with his/her face oriented toward the tutor or the book	to the satisfaction of the tutor
	and will respond	correctly to tutor's directions at least once each session

Group Objective 2 - Cursive Writing

Given sheets with a model of 2 different letters each week, directions read by the tutor, and a practice paper,	the child will write the letters	as described and judged accurate by the tutor

Group Objective 3 - Common Concepts

Given a prompt to discuss concepts related to every day life, e.g. descriptions (a ROUND pencil) and spatial relationships (the clock is ON the wall),	the child will describe objects and experiences pertaining to the subject	using complete sentences

GROUP RELIABILITY PROCEDURES

During the first two months of intervention procedures, the aides were checked almost daily on their adherence to the procedures specified. After two monitors agreed that the procedures and measures obtained were reliable (90-100%) only intermittent reliability checks by a second observer were obtained.

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ENTRY LEVEL: STEVE

Steve entered the second grade with oral language and reading deficits. At the time of referral, Steve's oral reading and comprehension grade level was determined as 1.3 as measured by the minimum objectives for that grade level. Specifically, Steve could read and comprehend the stories in Units 1-7 in the Merrill Linguistic Reading Series, Book 1.

INSTRUCTIONAL OBJECTIVES

See Group Instructional Objectives 1-3

Objective 4 - Steve

Given any story selected by the tutor from the Merrill Linguistic Reading Series through Book 4, Unit 18, or Ginn Basic Reader, We Are Neighbors, through story 20	the student will read orally	the selected story with 90-100% accuracy in word recognition

Objective 5 - Steve

Given 2-5 comprehen. questions about the story above taken from the reading program	the child will verbally answer the questions	with no more than one error

MEASUREMENT AND TEACHING/LEARNING PROCEDURES

See Supplement A for Merrill Linguistic Readers procedures, page 84.

See Supplement B for Ginn Basal Reading Series procedures, page 92.

During February the Merrill Reading Program was dropped from Steve's program of instruction.

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RESULTS

Group Objective 1 - Steve

During the reading of the stories Steve did learn to sit quietly and was able to speak in complete sentences based on the model provided by the other children. His teachers were alerted to his participation in class activities and praised him when he responded appropriately.

Group Objective 2 - Steve

The cursive writing objective was not met. Steve mastered 6 out of 26 letters and then this part of the program was eliminated.

Group Objective 3 - Steve

In December Steve's common concepts story consisted of one sentence of five words ("The body has got feet.") In April his story was made up of several complete and related sentences ("I feel when it rains. I feel cold and freezing. The rain makes you wet. I don't like thunder and lightning. I don't care if it rains. I care when it's sunny.")

Objectives 4 and 5 - Steve

When intervention procedures began Steve could read and comprehend at the 1.3 grade level in the Merrill Linguistics Readers. After seven 18 day periods (May 20), his grade level in oral reading and comprehension was 2.0 (Figure 23).

ENTRY LEVEL: LINDA

Linda entered the second grade at Hinesburg after school had started in the fall with no reading skills at all. The arbitrary 1.0 grade level was given her at the time intervention procedures were initiated.

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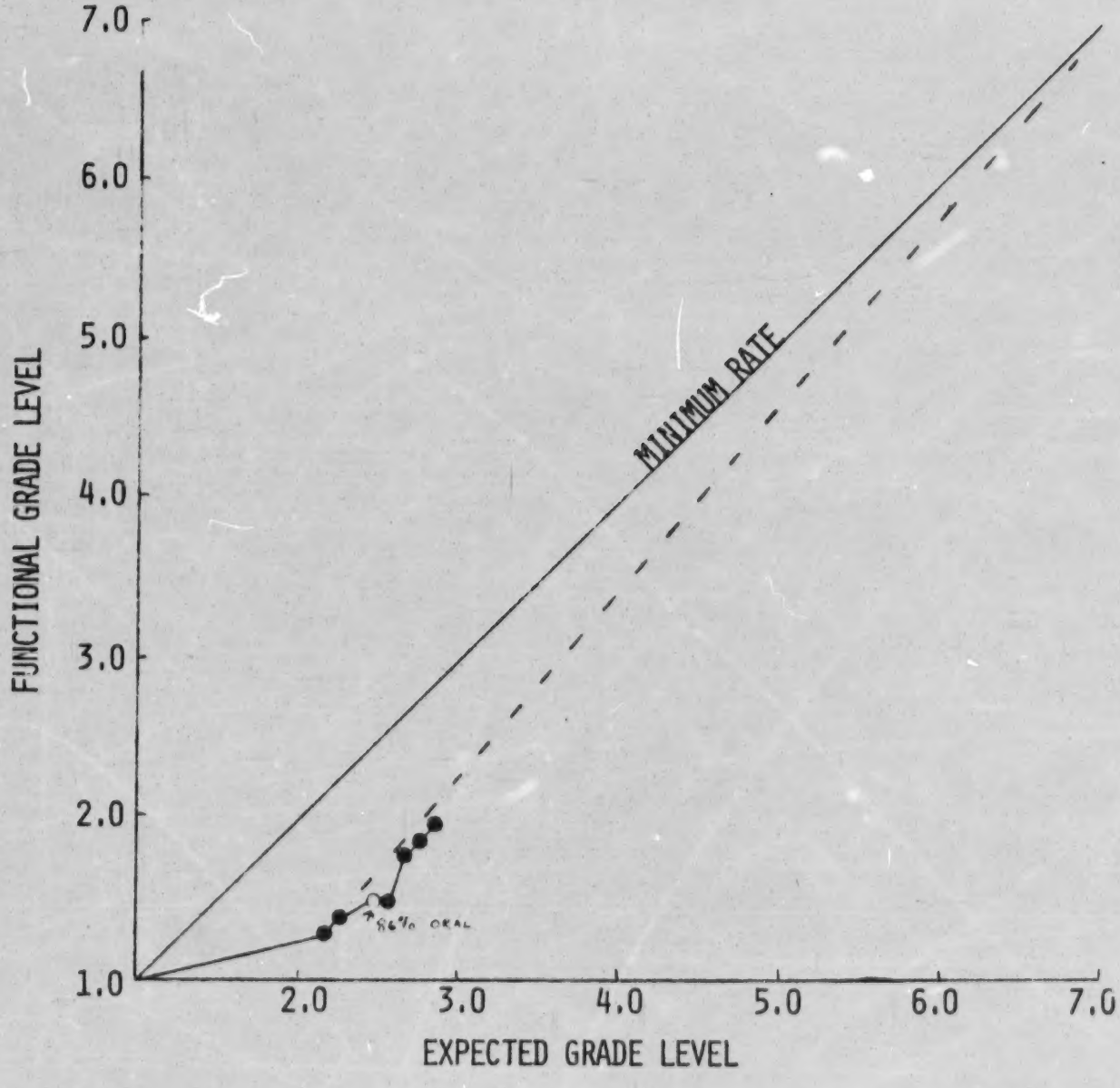
Fig. 23 STEVE'S ORAL READING AND COMPREHENSION



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INSTRUCTIONAL OBJECTIVES

See Group Instructional Objectives

Objective 4 - Linda

Given a story selected by the tutor from the SRA Linguistic Readers, Book D through Unit 6,	the child will read orally	the selected story with 90-100% accuracy in word recognition

Objective 5 - Linda

Given 5 comprehension questions about the story above taken from the reading program	the child will verbally answer the questions	with no more than one error

MEASUREMENT AND TEACHING/LEARNING PROCEDURES

The SRA Linguistic materials were presented to Linda in the manner recommended in the teachers' manual for each reading level (Rasmussen and Goldberg). These activities were supplemented by a 4-step SRA Linguistic Training Program.(See Supplement C, page 95.)

RESULTS

Group Objective 1 - Linda

Linda met the objective by attending to the reading of the stories to the satisfaction of the tutor and by demonstrating comprehension by responding correctly at least once in every story.

Group Objective 2 - Linda

The objective was not met and was discontinued for all seven children.

Group Objective 3 - Linda

In December Linda's response to the common concepts

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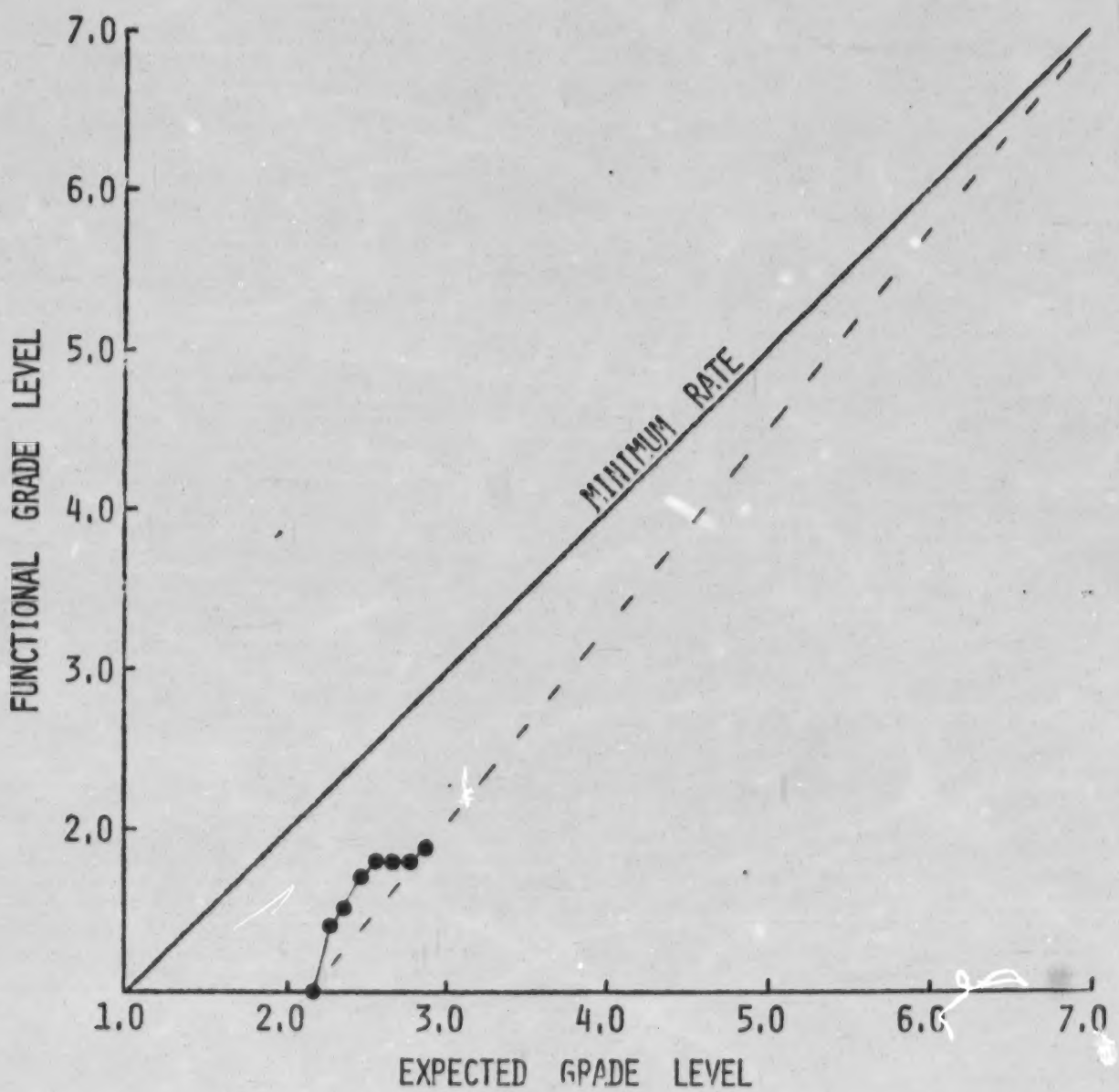
Fig. 24 LINDA'S ORAL READING AND COMPREHENSION



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story was one six-word sentence ("The body has eyes and a head.") In February her response consisted of several interrelated sentences ("What dreams are. When you are sleeping what you dream you think is really true. Sometimes you dream your mother is dead and you wake up and she is in bed.")

Objective 4 and 5 - Linda

Linda's oral reading and comprehension grade level at the beginning of intervention procedures was 1.0. After seven 18 day periods, her oral reading and comprehension grade level was 1.9. If her progress continues at the same rate, she will achieve the objective designated for her at the end of grade two and will also achieve the minimum objectives by the end of six years in school (Figure 24). In March Linda's oral reading accuracy decreased so the criterion was changed for her. Linda was required to read at 95% accuracy and to repeat stories until criteria was met. In April the review was discontinued and she started reading new stories.

ENTRY LEVEL: ART

Art entered the second grade with a deficit in reading and social behaviors. He appeared to be a very unhappy child. He cried and whined often throughout the course of the school day. This was especially evident during reading sessions. Art's oral reading and comprehension grade level was determined as 1.2 using the minimum objective system practiced in that grade. Art was tutored daily by the technical associate in the Merrill Linguistic Readers.

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INSTRUCTION OBJECTIVES

See Group Objectives 1-3

Objective 4 - Art

Given any story selected by the tutor from Merrill Linguistic Readers, Books 1-4, through Unit 14	the child will read the selected story orally	with 90-100% accuracy in word recognition

Objective 5 - Art

Given 2-5 comprehension questions about the story above	the child will verbally answer all the questions	with no more than one error

Objective 6 - Art

Given specific teacher instructions during reading sessions repeated no more than 2 times	Art will initiate the response to the instruction	in no more than 30 seconds without crying or complaining

MEASUREMENT AND TEACHING/LEARNING PROCEDURES

Objectives 4 and 5 - Art

See Supplement A for Merrill Linguistic Readers procedures.

In January the tokens were removed. In February Art was asked for a solution to his reading problem. He asked for a book which was provided for him to read at home to his mother. In April his free time was again earned contingent on accuracy. In May the total class started reading twice a day. Each 18 days a point was plotted on the 6 year MO graph.

Objective 6 - Art

Any uncooperative behavior observed during tutoring sessions was timed. Any occurrence in excess of 30 seconds was recorded on the reading data sheets. At enty level Art was measured during three 30 minute reading sessions and on every occasion

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his uncooperative behavior was total, that is, 30 minutes of uncooperative behavior was recorded at each session. No graphs were used; the evaluation was based on raw data.

A contingency was started during all individual tutoring sessions. Art was expected to sit in his chair with his feet on the floor and face oriented toward his work or tutor. He was to respond to all tutor directions within 5 seconds without crying or emitting verbalizations such as, "I can't", "my head aches", "I have heart burn". During a session when Art refused to work, the tutor ignored inappropriate responses. She repeated instructions once, then did a continuous timing and recorded the accumulated time it took him to respond appropriately. Any inappropriate response of less than 30 seconds duration was ignored and not recorded. If no time was recorded Art received free time.

RESULTS

Group Objectives 1 and 3 - Art

Although Art had no oral language deficits he participated in many of the activities provided. His responses were outstanding on all occasions. This served as a fine model for the other children.

Objective 4 and 5 - Art

During November when Art was being tutored by the technical associate, he progressed at the accelerated rate set for him. By early December his rate of progress had decreased and he started displaying avoidance behaviors. By January this not

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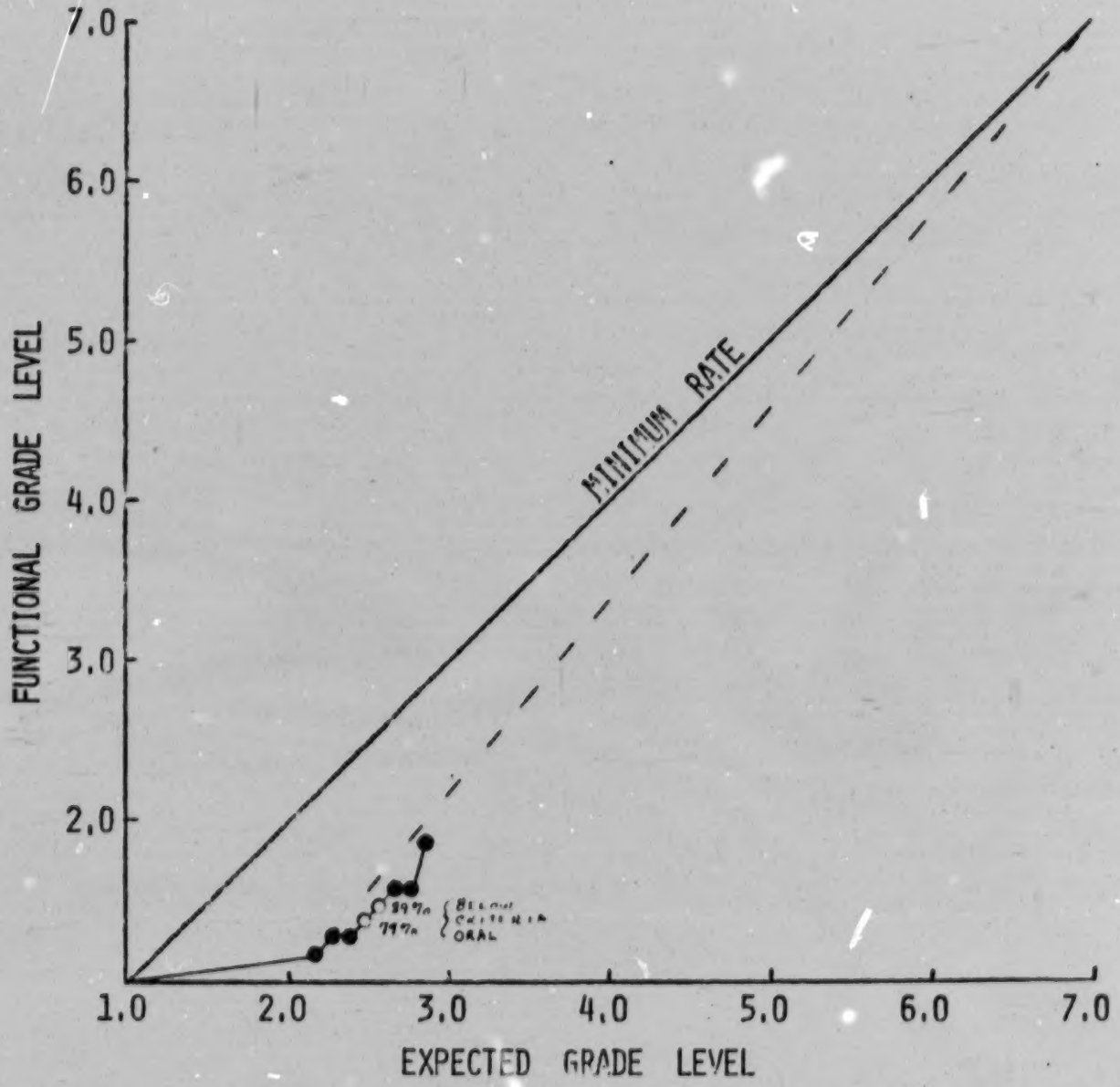
Fig. 25 ART'S ORAL READING AND COMPREHENSION



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only affected his rate of learning but also his accuracy. When Art started reading at home his accuracy improved from a 79% to 89% range in January and early February to above 90% for the remaining points. His rate continued to be slow, however. In May after the double reading sessions were adopted by the class, his rate accelerated abruptly. If his learning rate continues as it has in May, Art will still fall short of meeting this year's objective, however, he will reach grade level by November of next year (Figure 25).

Objective 6 - Art

During the first ignoring contingency session, Art scored 7 minutes of inappropriate behavior. The next session he scored 14 minutes, and the third session, 7 minutes. No inappropriates exceeding 30 seconds occurred again until February when 10 minutes of inappropriate behavior occurred on two different days. His study behavior has been acceptable since that time.

DISCUSSION - Art

Art is reported by both parents and teachers to be a much happier boy. His tutor reports that in May, for the first time, he finally seems to look forward to reading. They all believe this is the "break through" they had hoped would occur in reading for Art.

ENTRY LEVEL: FRANK

Frank entered the second grade with deficits in language and work habits. His parents reported that he took phenobarbitol every day. This was originally prescribed by a doctor when at the age of six-months, Frank had a seizure

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diagnosed as petit mal. Frank's teachers described him as being either very quiet and lethargic, or hyperactive, with only short periods between when his physical activity fitted into a more normal pattern. Frank's oral reading and comprehension grade level was determined as 1.4 using the minimum objective system practiced in that grade.

INSTRUCTIONAL OBJECTIVES

See Group Objectives 1-3

Objective 4 - Frank

Given any story selected by the teacher from Ginn 100 Series through We Are Neighbors, story 24, or SRA Readers through E, Unit 6,	the child will read the selected story orally	with 90-100% accuracy in word recognition

Objective 5 - Frank

Given 2-5 comprehension questions about the story above	the child will verbally answer all the questions	with no more than one error

Objective 6 - Frank

Given a tutoring situation and specific instructions from the tutor for specific responses	Frank will sit with his feet on the floor and his face at least 9 inches above the surface of the desk and oriented on his work, and initiate the response	within 5 seconds with no irrelevant conversation

MESUREMENT AND TEACHING/LEARNING PROCEDURES

Objective 4 and 5 - Frank

See Supplement B for Ginn 100 procedures, page 92.

During January Frank earned sugar cereal contingent on correct sentences read. That procedure was terminated in

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February.

The school nurse and family doctor cooperated to reassess Fred's health problem and phenobarbital was discontinued.

In May the free time contingency was manipulated to include a response cost factor contingent on a slow reading performance. For every minute beyond 20 minutes it took Frank to complete the assigned reading, a minute was subtracted from his free time. It was soon changed to include a total loss of free time if more than three minutes were lost.

In April the Ginn 100 Series was dropped and the SRA Readers used in its place. The six year graph was not changed and the point was placed at the 1.9 level as was the case in the previous month to indicate no progress. An asterisk was placed at the level of the SRA entry level which was 1.5.

The SRA reading materials were used as recommended by the publisher in the teacher's manual for each reading level (Rasmussen, Goldberg, 1965.) A story was not read until all words for the story could be read correctly from the word family list at the start of each section. The 18 day MO graph plotting continued under all conditions. Oral reading and comprehension accuracy was calculated as for the Ginn 100 Series.

RESULTS

Objective 1 - Frank

Frank very quickly met the objective, but the stories were continued occasionally. His teacher believed the same

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objective was met by his participation in the science and social studies activities with the class.

Objective 2 - Frank

Frank experienced great difficulty in forming letters. He met criteria on only 3 of the 26 letters.

Objective 3 - Frank

Frank consistently responded with complete sentences. He seemed to grow in skill toward more adequate use of interrelated sentences.

Objectives 4 and 5 - Frank

Frank progressed at his accelerated rate during October and November when the teachers were implementing the procedures. During December and January his accuracy dropped. It increased to above criteria through the use of the sugar cereals and attending contingencies.

Through March and April his rate of learning decreases and in spite of several contingency changes, his rate was not restored.

No progress was reported in May because of the change to the SRA Linguistic Series. There is not sufficient data to predict Frank's status in the SRA Readers. His Ginn objective would not have been met had his February-May rate continued (Figure 26).

DISCUSSION

Though graphs were not plotted for attending and completion behaviors, the tutors reported the procedure to be effective in controlling the behaviors to their satisfaction.

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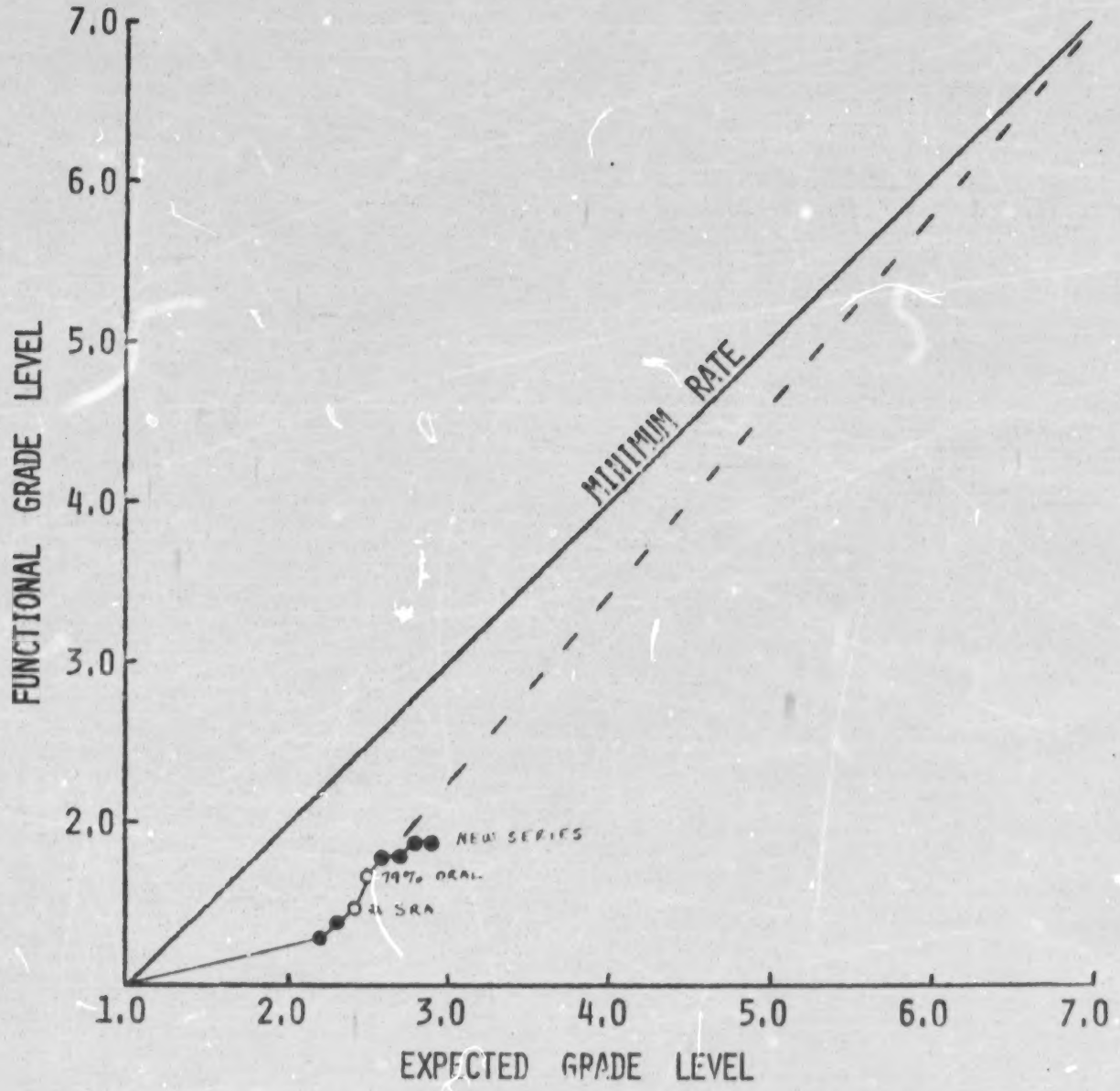
Fig. 26 FRANK'S ORAL READING AND COMPREHENSION



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When the phenobarbitol was removed, Frank experienced a two week adjustment period during which time he displayed greater extremes of behavior than previously noted. After the adjustment period, his teachers were pleased that the drug had been removed.

All involved with Frank agreed that we have not succeeded in identifying a lasting reinforcer for Frank. He continues to be a difficult child to motivate. The data was disappointing to the team because it could not predict completion of the six year objectives. Frank will require more individualized instruction next year.

ENTRY LEVEL - TOM

Tom entered the second grade with language deficits. No social deficits were identified for the purpose of this study, however, Tom was very quiet and seldom participated in class activities. Tom's oral reading and comprehension grade level was determined as 1.3 using the minimum objective system practiced in that grade.

INSTRUCTIONAL OBJECTIVES

<u>See Group Objectives 1-3</u>

<u>Objective 4</u> - Tom

Given any story selected by the tutor from Merrill Linguistics Readers, Book 1-4, Unit 18, or SRA Levels A-E, Unit 5,	the child will read the selected story orally	with 90-100% accuracy in word recognition

<u>Objective 5</u> - Tom

Given comprehension questions about the story above	the child will verbally answer all the questions	with no more than one error

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MEASUREMENT AND TEACHING/LEARNING PROCEDURES

See Supplement A for Merrill Linguistic Readers procedures, page 84.

The SRA reading materials were used as recommended by the publisher in the teachers manual for each reading level (Rasmussen and Goldberg). A story was not read until all words for the story could be read correctly from the word family list at the beginning of each section.

Objective 4 - Tom

Tom was asked to read a story orally. As he read, the tutor tallied his errors and the percentage of accuracy was calculated by dividing the number of words read correctly by the total number of words read and multiplied by 100.

Objective 5 - Tom

Five comprehension questions were asked about the story read. A "+" was recorded on a data sheet for each correct response. Tom was praised for correct responses. A "0" was scored when an incorrect response was given. Together the tutor and Tom located the correct response by referring back to the story. The percentage of accuracy was calculated by dividing the number of correct responses by 5 and multiplying by 100.

Oral reading and comprehension accuracy were plotted on a six-year MO graph every 18 days.

RESULTS

Objective 1 - Tom

The opportunity was not provided for as many story reading times as was stated in the objective. Tom met the

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criteria specified in the objective on the stories that were read. In the judgment of the teachers, the same objective was also met by Tom's participation in social studies and science activities with the class.

Objective 2 - Tom

The objective for letter writing was not met. Only 6 out of the 26 letters were mastered.

Objective 3 - Tom

In December and January Tom responded in complete sentences averaging five words in length. By March he responded with complete sentences averaging eight words in length and combined several interrelated sentences to make a riddle to which his classmated guessed the answer.

Objective 4 - Tom

Tom progressed through both reading series at a rate coinciding with his accelerated rate line during the first four months of intervention. During the months of February through April, his rate decreased and fell below his accelerated rate line. There was also a drop in his school attendance. In February and March Tom's attendance was only 50%. During April and May his attendance improved and so did his learning rate. The slope of the line connecting the April and May paonts indicates that if that learning rate were to continue, Tom would fall just short of meeting this year's objectives, but would be on grade level at 3.5 which would be three and one half years sooner than his accelerated rate line (Figure 27) indicates.

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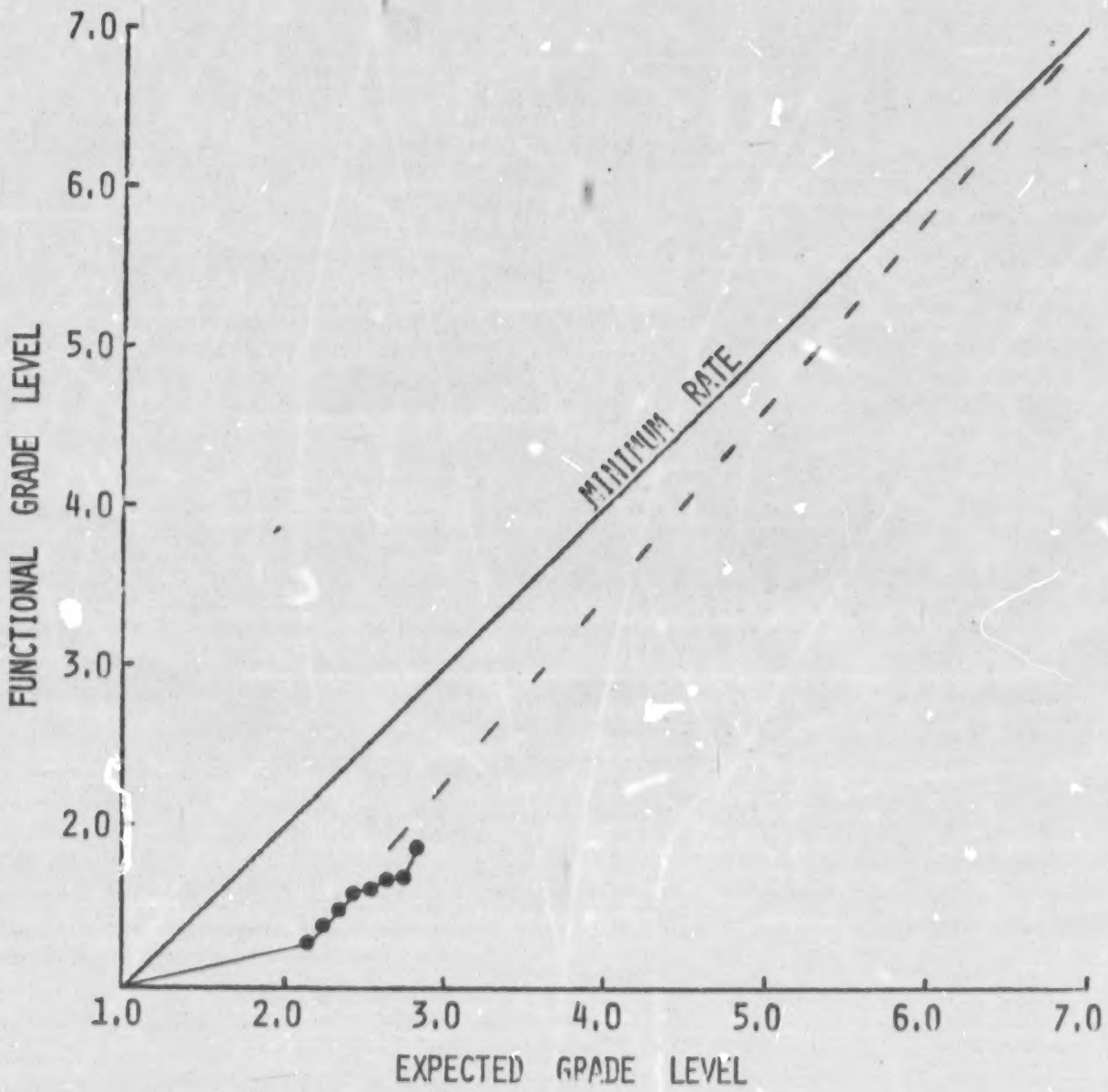
Fig. 27 TOM'S ORAL READING AND COMPREHENSION



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DISCUSSION

All school personnel who worked with Tom, his brother and his mother reported tremendous gains in Tom's social behaviors. His participation in class activities changed from limited response,to direct requests,to total voluntary participation in a way that related to the subject at hand. His mother said he was happy to attend school and shared his school experiences at home.

ENTRY LEVEL: ROB

Rob entered the second grade with language and social deficits. He had a very short attention span, low tolerance level, was unable to do any independent work, and cried easily. At the time of referral Rob's oral reading and comprehension grade level was determined as 1.4 as measured by the minimum objective system as practiced in his grade. Specifically, he could read the Ginn Preprimer, My Little Blue Story Book with 90-100% accuracy.

INSTRUCTIONAL OBJECTIVES

See Group Objectives 1-3'

Objective 4 - Rob

Given any story selected by the tutor from Merrill Linguistic Readers, Books 1-5, Unit 2, or Gin, We Are Neighbors, stories through 24,	the child will read orally	the selected story with 90-100% accuracy in word recognition

Objective 5 - Rob

Given comprehension questions about the story above	the child will verbally answer the questions	with no more than one error

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Objective 6 - Rob

Given specific teacher instructions during reading and repeated no more than once	Rob will initiate the response to the instructions	in no more than 5 seconds with no crying, complaining or physical aggression

MEASUREMENT AND TEACHING/LEARNING PROCEDURES

See Supplement A for Merrill Linguistics Readers procedures, page 84.

See Supplement B for Ginn Basal Reading Series procedures.

Objective 6 - Rob

Any uncooperative behavior observed during tutoring sessions was timed. Any occurrence in excess of 30 seconds was recorded on a data sheet. At entry level Rob was timed at 40 minutes of continuous uncooperative behavior..During all individual tutoring sessions Rob was expected to sit in his chair with his feet on the floor and face oriented toward his work or tutor. He was to respond to all tutor directions within 5 seconds, with no crying or verbalizations such as, "I can't", "I won't", "Not now", etc. During a session when Richard refused to work, the tutor ignored inappropriate responses. She repeated instructions once, then did a continuous timing and recorded the accumulated time it took him to respond appropriately or indicate that he was ready to respond. Praise was given for all appropriate responses. Any inappropriate response of less than 30 seconds was ignored but not recorded. No graph was used. Progress was evaluated from the raw data recorded on the data sheets.

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RESULTS

Group Objective 1 - Rob

The opportunity was not provided for as many story reading times for Rob as was stated in the objective. He met the criteria specified on the stories that were read. In the judgment of the teachers, the same objective was met by Rob's participation in social studies and science activities with the class.

Objective 2 - Rob

The objective was not met in letter writing. Only 6 out of the 26 letters were mastered.

Objective 3 - Rob

In December Rob responded to the discussion of common concepts with a 3 word sentence ("It has arms".) Within two months Rob was responding with more complex sentences ("The fire extinguisher is inside the fire box".) Rob was exited from this part of the individualized program and joined his class in creative writing.

Objective 4 and 5 - Rob

Rob's oral reading and comprehension grade level at the time he was referred was 1.4. After 7 18 day time periods of intervention procedures his grade level was 2.2. Continuing at his present rate he will achieve the objectives designated for him by the end of Grade 2 and the long range objective of being on grade level at the end of six years (Fig. 28).

Objective 6 - Rob

Before the ignoring contingency was initiated, three

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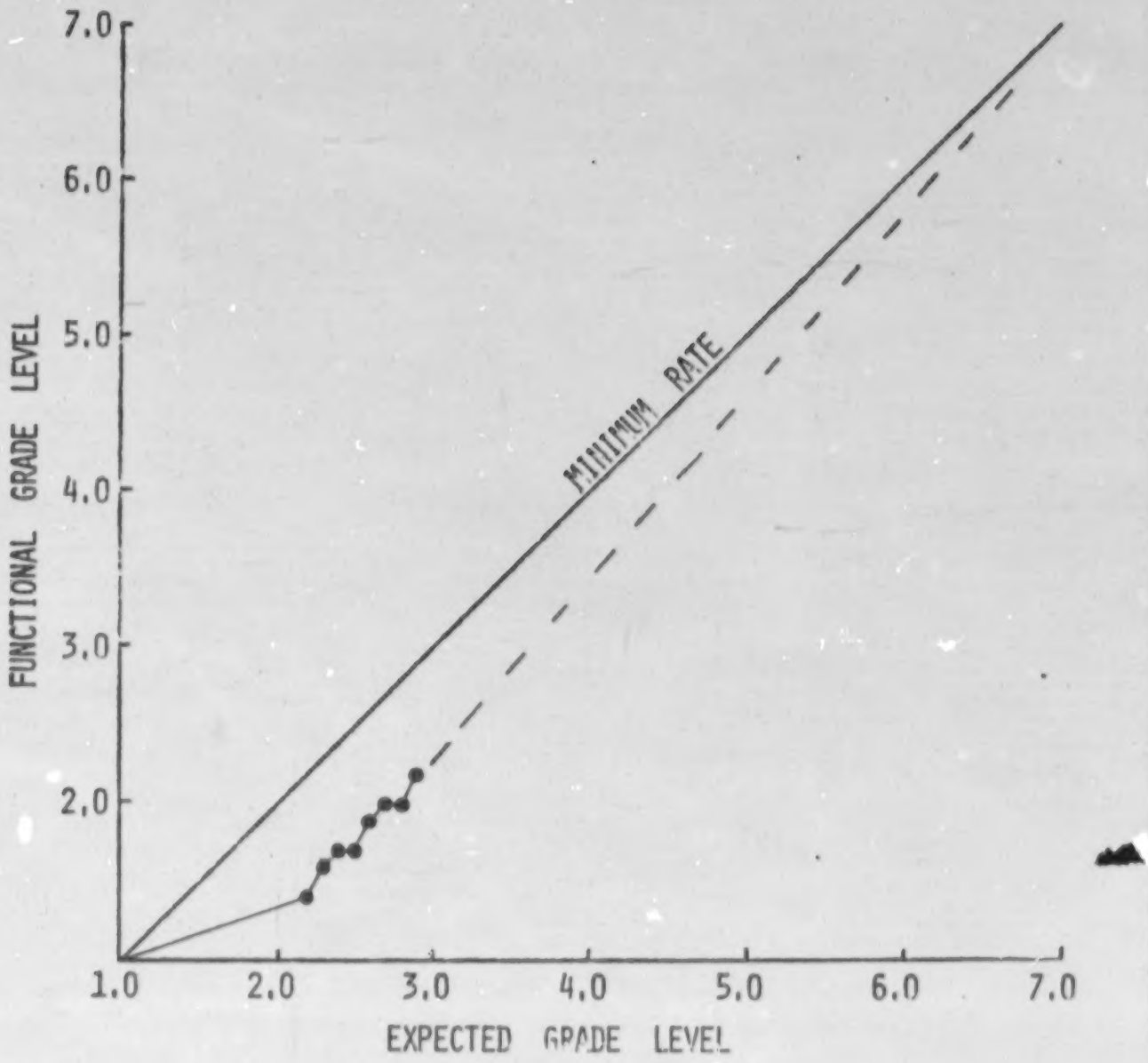
Fig. 28 ROB'S ORAL READING AND COMPREHENSION



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sessions were recorded with accumulated inappropriate behavior which continued through the entire reading session of 30-40 minutes. During the first ignoring session, Rob was involved in inappropriate behaviors for 20 minutes, followed by excellent performance academically. During the next ignoring session, he accumulated 10 minutes of inappropriate study behavior, again followed by excellent performance academically. Four weeks passed before the next uncooperative session occurred. Nine minutes were accumulated on that occasion. During the next two months, three more occasions of inappropraite study behavior occurred with durations of 10 minutes, 10 minutes and 5 minutes. Thereafter, the ignoring technique was used as needed, but only isolated occurences of less than 5 minutes of inappropriate study behavior occurred during reading sessions.

ENTRY LEVEL: KEN

Ken's entry level was arbitrarily placed at the 1.0 grade level because, not only was he a non-reader, but he demonstrated no consistent mastery of basic readiness skills. He also demonstrated physical aggression, such as pushing, hitting, kicking, and verbal aggression, such as "(explitive deleted)".

INSTRUCTIONAL OBJECTIVES

See Group Objectives 1-3

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Objective 4 - Ken

Given any story selected from the SRA Level A-D	the student will read orally the selected story	with 90-100% accuracy on word recognition by the end of the school year

Enabling Objective 4a - Ken

Given any 10 unknown words selected in order from the Macore Pre-Primers 1-10 printed on flashcards and presented one by one until each word is presented 3 times	the child will say the word correctly	with 100% accuracy 2 consecutive days

Enabling Objective 4b - Ken

Given any Macore Book 1-10 and the opportunity to read the book repeatedly	the child will read the book orally	with 100% accuracy

Objective 5 - Ken

Given 5 comprehension questions or written evaluation sheets about the story or section of a book	the child will demonstrate his comprehension by answering the questions	with 80-100% accuracy

Objective 6 - Ken

Given a 30 minute reading or math period in the morning recorded at approximate 1 minute intervals	the child will attend to his assigned task (head oriented toward tutor or materials)	80-100% of the intervals

Objective 7 - Ken

Given any classroom setting where an aide or teacher were present	Ken will emit verbal or physical aggressions	on no occasions

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MEASUREMENT PROCEDURES

Standard second grade minimum objective system measurement procedures revealed that no progress was made toward achievement of the SRA reading objectives. The following measurement procedures were then adopted:

As the flashcards were presented, a "+" was recorded on a data sheet when the correct response was given. If an incorrect response was given, a "0" was recorded on the data sheet. When criteria was met for each word, it was transferred to a cumulative graph.

As Ken read orally, his tutor listened to determine whether or not mistakes were made. A record was kept of the number of times a book was read before the 100% criteria was met. This information was transferred to a frequency graph.

When SRA Level A Reader oral reading was started, a tally was kept of each mistake. A percentage of oral reading accuracy was calculated by dividing the number of words read correctly by the total number of words read and multiplied by 100.

Comprehension work sheets were corrected and scored by dividing the number of correct responses by the total possible responses and multiplying by 100. The oral reading and comprehension accuracy was plotted on graphs.

Attending behavior measures were taken at intervals which averaged one minute (VI,1). A "+" was scored on a 3x5 card which was taped to Ken's desk, if his face was oriented toward a tutor or assigned task. A "0" was scored if his face was oriented away from tutor or assigned task.

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TEACHING/LEARNING PROCEDURES

At the beginning of each reading period flashcards were presented as described in the objective. As each card was presented, the child was asked to respond. If the correct response was made, he was praised. If an incorrect response was given, the tutor said the correct word and the child repeated it after her. When three correct responses were made consecutively on two consecutive days, the word was considered "learned" and the card was removed from the pack. Another unknown word was inserted in its place for the next session.

When all the words were learned for the book, Ken was given the opportunity to read the book. He was praised for every word read correctly during the first weeks. Praise was thinned until he later was praised only for reading a complete sentence correctly. A story was read repeatedly until it could be read with 100% accuracy.

Word decoding practice was used each session also. Words taken from the book currently being read were written on the chalkboard. As the tutor pointed to each word, Ken said the word. If he did not say the word correctly, he was asked to give the sound of each letter in isolation and then he was asked to blend the letters and finally, say the whole word. He was assisted with letter sounds, and if after two tries he was unable to give the correct word, the tutor said it for him. Again, continuous praise was given for every sound, but thinned until it was given only for correct words.

In March Ken was given a glass marble for each sentence he read correctly.

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Objective 6 - Ken

During each 30 minute social measurement procedure, if Ken received a "+" in 80% of the intervals, he earned a snack. During the second 30 minute measurement period when the tutor was absent, a plus score in 80% of the intervals earned him 10 minutes of free time.

Objective 7 - Ken

Each time Ken indulged in verbal or physical aggression, he was placed in "time out" for 1 minute. Physical aggression was defined as pushing, hitting, kicking, biting, etc. Verbal aggression was defined as threats ("My father will get you") or obscene language directed to others.

RESULTS

Objective 1 - Ken

Ken responded well to the small group story sessions, however his teachers reported only limited generalization in the larger group activities.

Objective 2 - Ken

Ken mastered the writing of only 6 of the 26 letters.

Objective 3 - Ken

In January Ken consistently followed the model and responded only in complete sentences. Ken was not present for the group language development sessions after January when the speech therapist started an intensive auditory program with him. A future report can probably include an account of that service.

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Objective 4 and 5 - Ken

Ken read through page 49 of the SRA Level A Reader which falls far short of his year's objective (Figure 29).

Objective 4a - Ken

Ken took many months to learn the words for Mac and Tab. The 16 words learned for The Tin Man were mastered over a 5 week period. The 12 words for Al were mastered over a 1 week period. The 18 words for Tim were mastered over a 2½ week period. The 11 words for The Jet were mastered over a 4 week period.

Objective 4b - Ken

Mac and Tab was read 15 times before Ken achieved 100% accuracy. The Tin Man was read 5 times in order to achieve 100%. Al and Tim were read 4 times each to meet criteria. The Jet was read only 2 times for mastery. This shows progression toward a faster and faster rate of learning. Figure 30.

Objective 6 - Ken

During baseline Ken demonstrated good attending behavior 70% of the intervals in the tutor's presence and only 30% of the intervals without the tutor present. The contingency showed no effect on his attending behavior in the tutor's presence and only limited effect in the tutor's absence (50% of the intervals with attending behaviors). However, after three weeks the teachers reported that they wished to discontinue the contingency.

DISCUSSION

By the end of November the teachers reported that Ken's

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Fig. 29 KEN'S ORAL READING AND COMPREHENSION

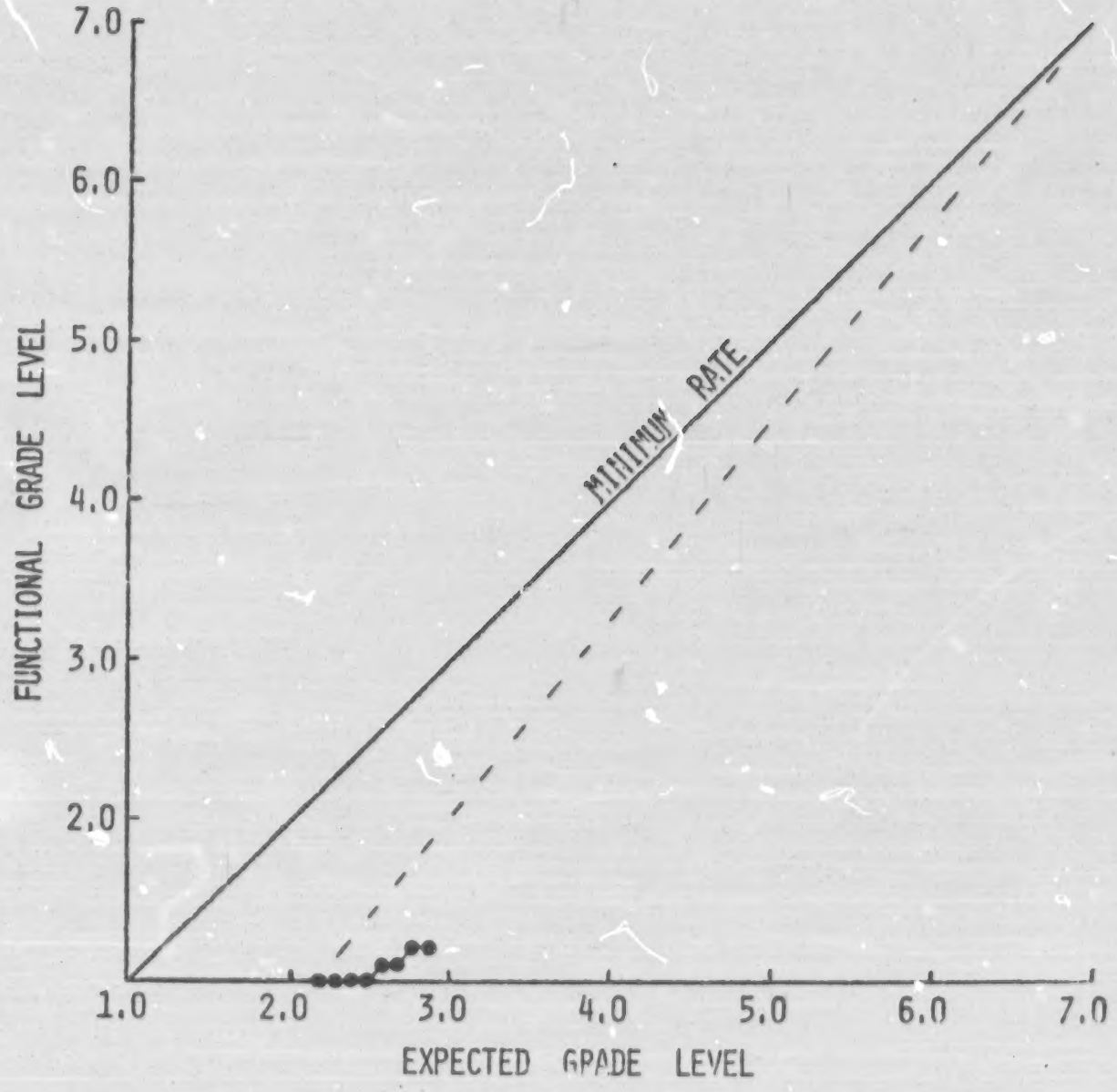

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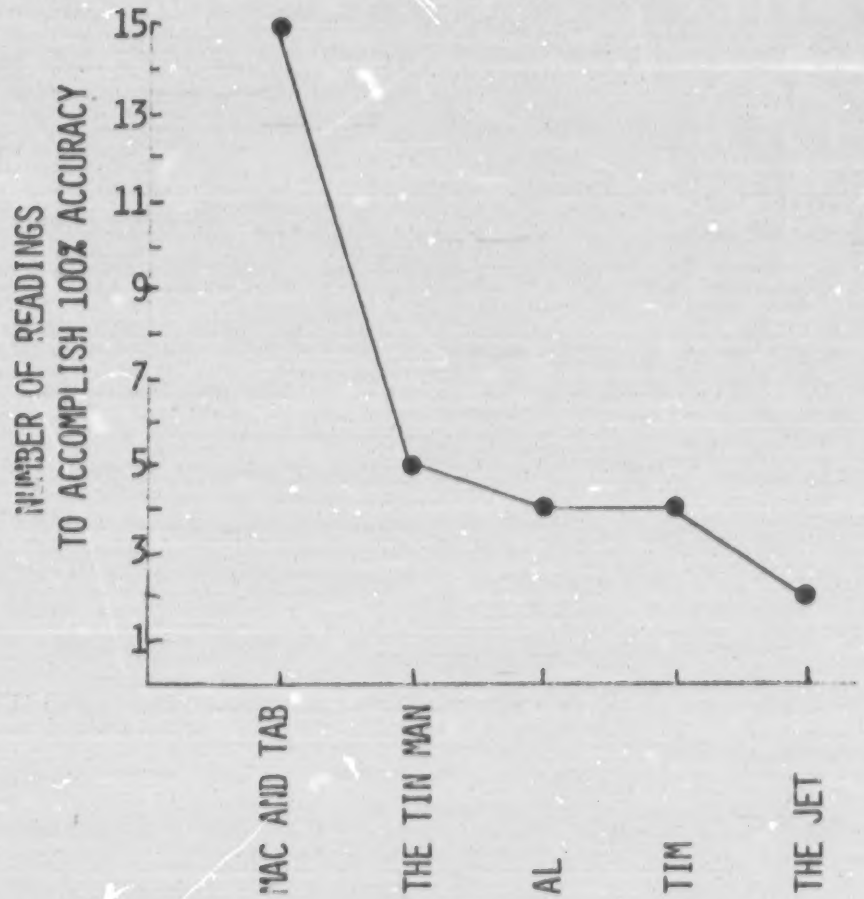
Fig. 30 NUMBER OF TIMES KEN READ MACORE STORIES TO ACCOMPLISH 100% ACCURACY IN ORAL READING



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social behavior had improved to an acceptable level which is probably the functicn of the tutor's very strong reinforcing praise.

Although Ken has not progressed at his accelerated rate, the school personnel considered this service a success because for the first time since he entered school, he is retaining waht he has learned. He could well have failed totally, or have been sent to an institution where he would be removed from his family and friends, at a cost greater than that under the existing service.

GENERAL DISCUSSION

Some of the objectives were difficult to meet because of scheduling problems with the auditory program developed by the speech therapist. The language expressed through music and dance started at the end of February and intensified during the week of March 8 and the week of April 15.

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SUPPLEMENT A

PROCEDURAL STEPS IMPLEMENTED WHEN THE MERRILL LINGUISTICS READERS PROGRAM IS USED

BETSY SCHNEIDER, ANITA RIVARD AND MILDRED HILL

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PROCEDURAL STEPS IMPLEMENTED WHEN THE MERRILL LINGUISTIC READERS PROGRAM[1] IS USED

Betsy Schneider, Anita Rivard and Mildred Hill

When the Merrill Linguistic Readers Program (MLRP) is used as an enabling reading program to accelerate a pupil's oral sentence reading performance toward minimum objectives (MO's) for oral sentence reading in a basal reading series, prior to implementation of the MLRP, a functional grade level* (FGL) for oral sentence reading performance in the basal series is obtained according to the following Terminal Objective and accompanying procedures:

Terminal Objective a Basal Reading Series

Step 1.

Near the end of each of the ten months of the school year, given a passage of consecutive sentences (150-200 words) which are equivalent to the MO paired with a pupil's expected grade placement** (EGP),	the pupil will orally read	the entire passage of sentences with at least 90% accuracy as reliably measured by at least two observers. The unit measured is a total sentence. Accurate reading of a sentence is when: 1) all words are read correctly upon the first unprompted response, and; 2) there are no repetitions, and; 3) there are no added words.

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[1] Schneider, B.M., Rivard, A.L., and Hill, M., Handbook for Merrill Linguistic Readers Program (in revision).

* A functional grade level is that performance which is at least 90% accurate.

** An expected grade placement is that which is equivalent to the number of years and months since the pupil's entrance in school.

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The teacher or tutor record a plus (+) for correct sentences, and a zero (0) for incorrect sentences. An incorrect word is immediately prompted and the pupil repeats the correct response. All oral sentence reading is recorded on a tape, and the responses are again scored by a second observer.

When a pupil's oral sentence reading FGL is less than 90% accurate for his expected MO in oral sentence reading in the basal reading series, he is eligible for the MLRP as an enabling teaching/learning procedure according to the following steps and the several accompanying objectives:

Procedural Steps & Measurements for MLRP

Step 2.

In order to determine in which of the six Merrill Readers a pupil will begin, Entry Level checks are given beginning with that for Reader 1. The Entry Level check on which a pupil orally reads sentences with less than 90% accuracy indicates the Reader in which the pupil begins the MLRP. Criteria for accurate reading is the same as that specified in Step 1.

For each Reader, there is a PROGRAM GUIDE consisting of Units, each Unit matching (1) "word pages" in the Readers on which are listed new reading words, and (2) the succeeding stories accompanying each word page. The pupil works on only those Unit Packets where there were reading words he read incorrectly on the first unprompted response. These words are termed "unknown" words.

Step 3.

In order to determine the Unit Packets on which a pupil will work, the pupil reads, from Word Sheets, all the words for a given

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Reader. For each incorrect response the teacher or tutor, prompts and the pupil repeats the correct response. A zero (0) is recorded on the PROGRAM GUIDE in a column next to the words. These words are matched on the GUIDE with Units each of which indicates the tasks included in a given Unit Packet. No criteria is specified for this task.

Step 4.

There are three different conditions under which a pupil may progress through the MLRP. Some pupils proceed under only one condition; other pupils proceed under two, or all three conditions. The following is a description of each condition.

Word-Card (WC) Conditions.

Before working in a Unit Packet, the pupil first "learns" the unknown words. These are learned in one of two procedures.

1. Flash card Procedure (FWC). Five word-cards, on each of which is printed an unknown word, are presented, one at a time, to the pupil who reads the words. If his first unprompted response is correct, a plus (+) is recorded on a data sheet, and the card is placed at the back of the card pack. If the response is incorrect, a prompt is given by the teacher/tutor/or partner, and the pupil repeats the correct response. A zero (0) is recorded and the card is placed in the second position in the pack. This procedure is repeated until three responses are made to each word. A word is considered "learned" when three consecutive correct responses are given on two consecutive days.

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2. Concentration Procedure: (CWC) For two pupils, or partners, five pairs of word-cards, on each pair of which is printed the same unknown word, making a pack of 20 cards. These are shuffled and spread out on a table face down. The first pupil turns over one card, placing it on the table in a "correct reading" position, and reads the word. If his first unprompted response is correct, he records a plus (+) on his data sheet. If his response is incorrect, a prompt is given by the teacher/tutor/or partner, and the pupil repeats the correct response. A zero is recorded. The pupil then turns over a second card and repeats the above procedure. He then turns the cards face down. When a pupil turns over two matching cards in one turn and reads both correctly, he may keep the pair. He then takes another turn. When he makes an incorrect response for one or both words, or the cards do not match, the turn passes to his partner. Turns alternate until all pairs are won.

Criteria for "learned" is the same as in the FWC conditions. When all unknown words in a Unit are learned, the pupil works in that Unit Packet.

No Word-Card (NWC) Condition

3. The pupil works in Unit Packets without ever having to meet the criteria for "learned" for any unknown words in the Units.

According to the condition under which the pupil is working, he proceeds in numerical order through only those Units in which he must work. He completes all or parts of

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the Packets as designated by the criteria specified for each task.

Step 5.

For each Unit, he must first read all new words appearing on the word page in the Reader. Responses are scored plus or zero, and prompted as they were in Step 3. In this step, partners may also score and prompt. No criteria is specified for this task.

Step 6.

The words are then dictated by the teacher/tutor/or partner and the pupil writes them on the space provided in the packet. He corrects his own spelling from the word page in the Reader. He re-writes any incorrect responses and marks a C beside correct responses. No criteria is specified for this task.

If 100% is attained for both word reading and spelling, the pupil must read only the last story in the Reader for that Unit. Otherwise, he must read all the stories in the Unit. As the pupil completes tasks, or can omit tasks, instructions on the pages of the Packets, direct the pupil to shade in equivalent sections in the PROGRAM GUIDE. In this way, the pupil records his rate or progress through the Reader.

Step 7.

The pupil reads the story silently and then reads it orally. The teacher/tutor/or partner records a plus (+) for each sentence read correctly as assessed by the same criteria in Step 1. Also, the pupil's reading is scored, prompted and taped as in Step 1. The responses are measured by a second observer. The mean agreement must be at least 90%

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Step 9.

The final measure is taken on the grammatical accuracy of the written answers to the questions.

The following grammatical skills are measured:

1. Each answer must be a complete sentence. The single word answer, such as yes (or no) is a complete sentence and is correct.

   Correct alternatives are: Yes, he went home.

   Yes. He went home.

2. Capital letters must be at the beginning of sentences and proper nouns.
3. Sentences must end with appropriate punctuation.
4. When necessary, appropriate punctuation must be within sentences.
5. All words must be spelled correctly.

The grammatical accuracy score is a composite of several language skills. A separate score for each skill may be computed.

To meet criteria, no more than one written response may be incorrect, except for Reader 1. Here, the accuracy for the total responses must average at least 80%.

Terminal Objective for the MLRP

Upon completion of the Merrill Linguistic Readers Program, and given the Reader 6 Entry/Exit check for sentence reading,	the pupil will orally read	all the sentences included in the check with at least 90% accuracy as reliably measured by at least two observers. The unit measured is a total sentence. Accurate reading of a sentence is when: 1) all words are read correctly upon the first unprompted response, and; 2) there are no repetitions, and; 3) there are no added words.

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Procedures, and reliability will be the same as specified in Step 7.

Three Enabling Objectives for the MLRP

1. Given any, or all, of the oral sentence reading tasks in any, or all, of the six Merrill Linguistic Readers, as determined by the procedures and criteria of the MLRP,	the pupil will orally read	all sentences on the given page with at least 90% accuracy as reliably measured by at least two observers. The unit measured is a total sentence. Accurate reading of a sentence is when: 1) all words are read correctly upon the first unprompted response, and; 2) there are no repetitions, and; 3) there are no added words.

This Objective accompanies Step 7.

2. Given the questions related to any, or all, given story(s), in any, or all, of the six Merrill Lin. Readers, matching those determined in the above Enabling Objective 1.,	the pupil, after silently reading the entire story and closing the book, will	write answers to the questions related to the story, the content of the answers being incorrect to no more than one answer. For Reader 1, the accuracy for the total responses must average at least 80%.

This Objective accompanies Step 8.

3. Given the written answers to the questions related to any, or all, of the given story(s) in any, or all, of the six Merrill Linguistic Readers, matching those in the above Enabling Objective 2.,	the pupil will write the answers with grammatical accuracy in the following skills whenever they apply:	to all of the questions, the accuracy being incorrect in no more than one of the responses to the questions. For Reader 1, the accuracy for the total responses must average at least 80%.

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SUPPLEMENT B

*PROCEDURAL STEPS IMPLEMENTED WHEN THE GINN 100 READING SERIES IS USED

SUSAN HASAZI

MARY M. PIERCE

*An adaptation of Burdett, C. S. & Fox, W. L. Measurement and evaluation of reading behaviors: Word recognition, oral reading and comprehension. Austin, Texas: Austin Writers Group, 1973.

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(GINN)

I. SIGHT WORD PROCEDURES

A. Entry Level Measurement

1. The word list consists of all the words in the story - numbered.

2. The words are presented to the pupil.

3. If the word is correctly read within a five second interval, the teacher will record a "+" in the box next to the word on the record sheet.

   An incorrect response or a delay longer than five seconds will be recorded as "0" or "-".

4. No feedback as to right or wrong is given to the child. He simply goes on to the next word.

5. Probably the teacher should discontinue if four or five words in a row are missed.

6. Duration of testing session: 5 - 10 min.

B. Learning session preparation and procedures

1. Flashcards of missed words are made and numbered on index cards.

2. Word acquisition data sheet is made.

3. The first ten words and numbers missed on the entry level test should be printed on the data sheet.

4. Flashcards should then be put in the same order as on the data sheet.

5. The first word is presented to the pupil by picking up the entire 10 word stack and showing the pupil the first word card for five seconds.

6. If the pupil responds with the correct word, the teacher will indicate approval by saying "good", "That's right" or other similar positive comments.

7. The teacher scores a plus "+" next to the word on the data sheet and the card will be placed at the rear of the stack.

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8. If the pupil responds incorrectly, the teacher will say the word aloud and have the pupil imitate while looking at the word card.

9. Each word will be presented three times during the learning session.

   A word is considered learned when 3 consecutive correct pupil responses are recorded in any one learning session.

10. Before the next learning session, the teacher should:

    a. Remove all "learned" word cards from the word stack.

    b. Add the same number of new word cards to the stack.

    c. Add the new words and their corresponding numbers to the data sheet.

    d. The number of learned words should be transferred to a tab sheet.

    e. Finally, enter the number of "learned" words on a cumulative record of pupil progress.

II. ORAL READING SESSION PREPARATION

When the pupil has "learned" all of the individual words in a given story, he should be allowed to read it aloud. If the pupil makes an uncorrected error or fails to respond within 5 seconds, a teacher response can be given to correct the error so the pupil may continue reading. When the pupil has finished reading, the teacher should record the following information on a data sheet:

SESSION	DATE	BOOK	PAGES READ	TOTAL WORDS	ERRORS	READING SCORE

III. COMPREHENSION

Ask the same number of questions each time a story or section of a story is read. This makes scoring and computations easier. Five questions is a good number and should be able to be scored as correct or incorrect. The teacher should prompt the pupil until the pupil emits a correct response. The pupil must always eventually give a correct response, even if it is only imitative, before he is asked the next comprehension question.

A correct response is followed by praise and a "+" should be entered in the appropriately numbered column on the data sheet.

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SUPPLEMENT C

PROCEDURAL STEPS IMPLEMENTED WHEN THE SRA READING SERIES IS USED

SUSAN HASAZI

MARY M. PIERCE

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TEACHING READING LINGUISTICALLY

1. Present entry level word list to child. Alow 5 seconds for the child to respond to each word.

2. On tutor copy of entry level word list, mark "+" next to each word for which the child gave a correct response and a "0" next to each word for which an incorrect response or no response was given.

3. Use linguistic procedure to teach word families which correspond to words missed.

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DIRECTIONS FOR THE LINGUISTIC PROCEDURE

A. Flashcard pre-test procedures

1. Tell the child which family you will be teaching. For example: "Today we're working with the "at" family".

2. Present 10 cards, one at a time, from the word family, and ask the pupil to tell you the word on each card.

3. Record a "+" on the data sheet if correct within 5 seconds. Record a "0" if incorrect or no response within 5 seconds, and correct by saying "The word is cat, say cat." Wait for the child to say it.

4. If pupil has 9 out of 10 correct, he either goes on to the next family or reads story in book corresponding to the family he's just learned.

5. If less than 90% is scored on the pre-test, use the training procedures on test sheet corresponding to family studied.

B. Training procedure

1. Discrimination training - This is learning to discriminate between members of word families and other words.

a. Read 2 words on test sheet, only one of which is a member of the word family, and ask the child which word is a member of the family.

b. Circle word on sheet to which child responds.

c. Child must have 9 out of 10 unprompted responses correct before proceeding to next step. If child has less than 90% correct, go back to presenting family and flashcard procedure and repeat discrimination training until a criterion of 90% is achieved. Then proceed with next step.

2. Rhyming words

a. Present a word from the family along with instructions to form a rhyme. (Example: "Tell me a word that rhymes with eat."

b. Present such words until the child has made 3 consecutive correct rhymes.

c. Instruct child to write each of the 3 rhyming words on test sheet.

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d. When 3 correct rhyming responses are written, proceed to next step. If child does not achieve 100% on rhyming, go back to discrimination training.

3. Initial Consonants - b,c,d,f,g,h,j,k,l,m,n,p,r,s,t,v,w

a. Teacher or tutor prints the appropraite family after the first 3 consonants, b,c, and d, and then instructs the pupil to do the same with the rest of the consonants.

b. When he is finished writing, he then reads aloud list of words (or sounds) he has made.

c. If child misses more than two words, return to rhyming step. If 2 or fewer words are missed, proceed to post-test.

C. Post-test

1. Present family on word cards again (follow procedures given in Step A.) Do this immediately after training procedure.

2. When post-test is 90% correct, proceed to story in book.

D. Turn to story in SRA book which corresponds to family being studied. If pupil misses a word, point to the word and have him try it again. If he still gets word wrong, tell it to him, having him repeat after you while looking at the word, making sure he understands the sound of the family in the word, and the initial consonant. Record number of words right over total number of words in story.

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